Lectures in *English as a Lingua Franca*:

Interactional Features

by

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Academic dissertation to be publicly discussed, by due permission of
the Faculty of Arts at the University of Helsinki in Metsätalo Lecture Hall 1,
on the 14th of December, 2012 at 12 o'clock.

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Preface

This is a dissertation about ELF and it is also written in ELF. This means it was written and supervised by people who are not native speakers of English, although native speakers of English can also be part of the ELF interaction (Seidlhofer, 2001). Despite the suggestion on language revision by the university, this dissertation did not go through it. This was done deliberately, based on earlier instances of similar procedure and discussions on native speaker model (e.g. Mauranen and Metsä-Ketelä, 2006; Mauranen, et al., 2010; Jenkins, 2011). The principle of language revision, especially by a native speaker of English, would have gone against the grain of ELF. I hope that the text is, nevertheless, clear, comprehensible, and intriguing.

As a note to those readers not familiar with transcripts: it looks worse than it sounds. When a text meant to be spoken is first written (transcribed) and then read, it appears impossible to comprehend, because it is not meant to be read, but heard. Similarly, when a text meant to be read is spoken, i.e. read aloud, it may seem more difficult to understand than spontaneous spoken language (Chafe, 2006). All spoken text is full of the features you see in the excerpts of this study.

Acknowledgements

Life has a tendency to prepare us for our futures. When I changed my career path from its business orientation to an academic one, I thought everything would change. I also felt that, although the years in business had been enlightening, I would not be using much of the knowledge I had gained during that time. But I did not know what life had in store for me and it is quite amazing to see today how the pieces of the puzzle fit together, from fluidized bed boilers and flue gases to English and English as a lingua franca.

As a doctoral dissertation, this study was completed at the University of Helsinki Department of Modern Languages. Additionally, this is an extended report on a Master's Program in the Department of Forest Products Technology at Aalto University School of Chemical Technology. Like everything else in life, this study would not have been possible without help and support from many people.

First I would like to thank my supervisor, Professor Anna Mauranen, for her unwavering trust in my ability to complete this task – even when I had serious doubts about it myself. Her guidance and enthusiasm were a wonderful source of encouragement and her SMS's carried me through some rough spots as well as increased my joy of progresses.

I would like to express my deepest gratitude to my external examiners, Professor Jennifer Jenkins from the University of Southampton and Doctor Hilkka Stotesbury from the University of Eastern Finland for their excellent comments and feedback on my work.

The SELF (Studying in English as a Lingua Franca) Group: Niina Hynninen, Diane Pilkinton-Pihko, Svetlana Vechinnikova, Anna Solin, Elina Ranta, Maria Metsä-Ketelä, Henrik Hakala, Ray Carey, Jani Ahtiainen, Netta Hirvensalo, Totti Itkonen, as well as the many visiting scholars and students, has been a wonderful place to meet and share ideas and to ask for helpful comments.

I was privileged to obtain funding from the GlobE Consortium, a joint venture of the University of Eastern Finland, led by Professor Markku Filppula; the University of Tampere, led by Professor Juhani Klemola; and the University of Helsinki, led by Professor

Anna Mauranen. This funding allowed me to focus on finalizing my study as well as to see how exciting a researcher's job can be. Participation in the consortium seminars has provided me with collegial support every researcher desperately needs; I am grateful to all the members of GlobE for your comments and encouragement.

I was also a member of Langnet Graduate School, which provided more collegial support as well as guidance at the beginning of my doctoral journey. Its sub-program, Multilingualism and Professional Communication, led by Professors Merja Koskela from the University of Vaasa and Liisa Tiittula from the University of Helsinki, was an interesting group of researchers with varied research topics, which allowed for many stimulating discussions. Without Langnet, I would not have met my local researcher colleague, Laura Löfberg from the University of Tampere, with whom I have had long discussions on methodology, structure, and other pertinent issues – including those on gardening.

Towards the end of my Master's studies, I was hired as a research assistant at the Research Unit for Variation, Contact and Change in English, Varieng. Only now I can appreciate the efforts of Doctor Anna-Liisa Vasko, who – like me – completed her dissertation while working as a lecturer. Back then I only saw the enthusiasm and collegiality of everyone in this research group, led by Professor Terttu Nevalainen.

The very first step towards completing the empirical part of this study was conducted with the help of Paper Engineers' Association. I extend my gratitude to Pirkko Molkentin-Matilainen and other association staff for helping me with the on-line survey completed among the members of this association. Naturally, all the respondents are thanked as well.

This study would never have been possible without the Department of Forest Products Technology, my superior, Professor Tapani Vuorinen, as well as the absolutely wonderful staff and students in the department. Although I know it must have been an ordeal to have me in the lecture hall with my video camera and feedback forms, everyone was more than accommodating to my pursuits. Not only was I allowed into the lecture halls to record the lectures and gather feedback from the students but I have also received encouragement

from the entire staff during my doctoral journey. It has seemed like this dissertation was a joint effort of the entire department. I am grateful to all, but would like to mention our Librarian Emerita, Kati Mäenpää, without whom finding literature would have been more challenging and lunch hours much lonelier. Our Janitor, Ari Häkkinen, has been in the habit of reminding me to go home, as well as asking me when my dissertation would be completed. Both comments are appreciated by me and my family. I also want to thank Professor Janne Laine, the Head of the Department of Forest Products Technology for granting permission for my work to be published in Aalto University *Science and Technology* series.

The Butterfly Effect Group at Aalto University, guided by Doctor Anu Yanar, has been inspirational to me on many fronts. The tasks and discussions with this group have allowed me to develop as a researcher, teacher, and a person. I thank you all for your support. Especially Doctor Pirjo Pietikäinen, my personal "Technician" and "Assistant", who has read most of my drafts, commented on them, and encouraged me to pursue the process to its completion, as well as my neighbor-at-work Pia Lahti, who is always there for me.

One of the pleasures of studying at one university and working at another is the networking opportunities at both places. I am grateful for the support many colleagues from Aalto University School of Chemical Technology have shown to me during my dissertation process. I want to especially thank my other neighbor-at-work, Sirje Liukko, who has guided me in my dissertation finalizing process as if I was one of her own doctoral students. It has been a great relief to find immediate answers and suggestions to my endless questions.

In addition to my current home department at Aalto University, I would also like to thank Aalto University Language Center and its staff for my first working years in academia. My colleagues there were helpful in showing me the ropes of university teaching. Furthermore, without a discussion with Diane Pilkinton-Pihko almost exactly seven years ago, I would not have thought of continuing my studies.

The Department of Modern Languages, English Philology, previously the English Department, also deserves my gratitude. When I first started my studies there, I was thoroughly inspired by the enthusiasm my teachers expressed. I had decided I would attend the Tutorial to see whether studying English at the university level was for me. This course was taught by two lecturers, Doctor Mark Shackleton and Doctor Mari Peepre, and I will never forget how amazing it was to be able to divert from the busy office work to spend two hours analyzing the language used in a poem. I thought I had found my way to paradise, which meant I had to continue my studies. After I did, I encountered many more wonderful teachers and even my younger daughter still remembers the always helpful Kathleen Moore from our Proseminar meeting: I had to bring my daughter to the meeting due to a babysitting problem. I appreciate the work of all the teachers and other staff during my studies at the English Department.

My studies were facilitated not only by the State of Finland through student allowances and other financial arrangements, but also by my former employer, Mr. Erkki Jauhiainen. Without his tolerant attitude towards my endeavors at the university, it would have been nearly impossible to complete my Master's Degree. I am very grateful for everything Erkki and his family have done for me.

My life would not be the same without my friends, who have always been very supportive of all my adventures – or at least after them. I have been blessed with so many wonderful people and I appreciate your understanding towards my lack of contact lately. Eeva-Leena Pakarinen was a true trooper with her patience during our vacation last spring: she allowed me writing time even at the Canary Islands. Jonna Paarma's drawing help with Figure 2.1 is also greatly appreciated.

My extended family and relatives deserve my gratitude as well. You all know how much you have helped me and it is comforting to know I can always count on you. My uncle, Doctor Ahti Pyörnilä, extended his help during my very first steps toward my studies as he bought the booklet containing the previous entrance examination tasks for the English Department. This helped me to prepare for my own entrance examination in 1998. My uncle, Markku Jaakkola, engaged his network to help me at the end of my Master's studies:

his former colleague provided me with the computer program which I used for the empirical part of my Master's Thesis. And yet another uncle, Seppo Pyörnilä, granted me financial support during my studies. My aunt, Helinä Saarivuori, is thanked for joining me on my very first conference trip abroad in Coimbra, Portugal. My cousin, Jyrki Pyörnilä, is thanked for providing the cover picture to this dissertation.

I dedicate this book to my treasures, Lotta and Katarina, who deserve my deepest gratitude for having had their lives shadowed by my studies and research. Without you I would be nothing; you have taught me the most important aspects of life. I hope you will be able to pursue your passions the way I have pursued mine. And finally, thank you, Juha, for being my Pessi so that I can be Illusia.

Hyvinkää, Halloween 2012
Jaana Suviniitty

In honor of my maternal ancestors
Mother Lotta Jaakkola née Pyörnilä (1940 – 1983)
Grandmother Sanni Pyörnilä née Kähmi (1908 – 1999)
Great-grandmother Martta Kähmi née Lytsy (1878 – 1961)

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Abbreviations

ELF	English as a lingua franca
EMI	English-medium instruction
FBI	Forest-based industries
HEI	Higher education institution
L1	First language
L2	Second language
NL	Native language
NNL	Non-native language
NS	Native speaker
NNS	Non-native speaker

1 Introduction

This study focuses on students' perception of lectures which are held in English by non-native speakers (NNS) of English. Since the students are also NNSs of English, English is used as a lingua franca (ELF). This study aims to identify and describe how the use of interactional features in these lectures influences the way students perceive them.

The world is becoming increasingly international at an escalated pace, and it is also a common perception that the world is smaller today than it used to be. Naturally, this is a metaphorical expression resulting from globalization, technological inventions, and accelerated worldwide communication. Although it is thought that this process has gained momentum since the industrial revolution, people have always travelled to different parts of the world, communicated with different cultures, and done business around the world, but not at the rate these are done nowadays. Currently, the speed of travel and communication have impacted our daily lives in ways which make science fiction novels from the 1960's almost seem like narratives of our ordinary lives.

In economics, internationalization means that companies increase involvement in global markets. In computer-related contexts, internationalization refers to a computer program or an Internet site being modified according to its target culture (DePalma, 2004). We can even regard some people as being more international than others depending on how much they have travelled and how knowledgeable they are on international issues.

Internationalization can, thus, be explored from many points of view, and we all are influenced by it. Multinational companies are acquiring businesses that previously were viewed as almost identifying the nation where they originated while national companies are changing their names in order to sound more international. Internationalization is mentioned in strategies of companies, universities, and most of us would like to think of ourselves as being international.

In most cases, especially when we consider corporations and educational institutions, internationalization means using English. English provides access to the global markets, the

Internet, popular music, movies, etc. But the world also influences English since its users are so varied: 470 to over a billion[1] are said to use English as a second or foreign language while 375 million people speak English as their first language (Crystal, 2003). Crystal has also calculated that NNSs of English outnumber its native speakers (NS) three to one. Most of the time, NNSs use English in situations where it is the only shared common language.

When we think of how internationalization influences our society and where these ELF encounters are most common, we come to realize that they are often high-stakes situations: in business, in science, and in education (House, 1999; Mauranen, 2011). Because of the important role of these encounters, they are increasingly under investigation. Some studies (Ljosland, 2007; Boegh, 2005) focus on how the use of English influences the native language, and how internationalization has been implemented in businesses and educational institutions. Others focus on whether students learn when they are required to use a foreign language for their degrees (Tatzl, 2011; Airey and Linder, 2008).

Finland is one of the "expanding circle" countries (Kachru, 1985) where English is not used as a native language or as an official language, but it has an important role in the society and is studied most often from the third grade throughout all educational levels. In the English Proficiency Index (EF, 2011) Finland was in the fifth place of the 44 countries[2] which took part in this study with "very high proficiency." Finland is also, with the Netherlands, a country in Europe where all universities offer at least one international Master's Program (Wächter and Maiworm, 2002), which in most cases can be seen identical to a Master's Program with English-medium instruction (EMI).

This study sheds light on one of these EMI Master's Programs, the linguistic features in its lectures, and how they match with students' perceptions of them. What are the differences and/or similarities between linguistic features in the examined lectures? How do students' perceptions of these lectures vary according to the use/non-use of the specific linguistic

[1] This number varies according to how the speakers are defined and use measured.
[2] These include countries in Europe, Asia, and Latin America

features? When comparing the same lecturers' ELF lecture and Finnish (=native language) lecture, are the same linguistic features found?

1.1 Internationalization in Professional and Academic Worlds

Language is only one of the aspects influenced by internationalization of our world, while for most corporations it is one of the overt changes people notice when a local company becomes a multinational corporation operating in various parts of the world.

Academia needs a common language for a wider audience and the possibility for varied scientific discussions. As early as 1967, an article published in *The Information Scientist* (Garfield, 1967) stated that English, for its accessibility and wide audience, should be used as a publication language by researchers. Despite this, today we are still arguing whether English is a beneficial language for the scientific community (Kaplan, 2001; Grabe, 1988) or a monster devouring other languages (Fewer, 1997; Swales, 1997; Phillipson, 2009).

Since academia educates not only researchers but also the workforce, internationalization and the impact of multinational companies and concerns have to be considered when developing curricula. In other words, internationalization affects the professional world, which, in turn, influences academia.

In Finland, due to its location, history, and size, internationality, to a certain degree, has always been present. If internationality is measured by international trade, Finland has been more international than the other European Union (EU) countries since the 19th century, as depicted in the graph below in Figure 1.1 (Hjerppe, 2011).

Figure 1.1 Exports and imports in Finland and EU 15 (Hjerppe, 2011)

According to this graph, with only a few exceptions, Finland has imported and exported more goods than the other EU countries together during a period ranging from 1860 to 2005. From trading fur and tar for food, beverages, and tobacco in the 19th century, Finland has developed into a trader of electrical and optical equipment, machinery, transport equipment, and paper and pulp for foodstuffs, petroleum and petroleum products, chemicals, and transport equipment today. Finland's main trading partners today include Russia, Germany, and Sweden[3].

Since Finland is the most forested country in Europe[4], forest-based industries have been seen as some of the most important for the Finnish economy. Before the turn of the 20th century, Finland's economy depended on tar manufacturing. When the need for tar decreased and finally ended, forest-based companies gradually began producing pulp and paper (Kuisma, 2006). Until the 1980's, these companies were owned predominately by Finnish owners and even by the Finnish government. To improve their economy, these companies started to centralize their production and joined their efforts and many resulting

[3] Based on information in Economywatch.com 2010
[4] See, e.g., www.forest.fi

mergers occurred during the 1990's. In 1985, there were twenty major forest products companies in Finland while at the end of the 1990's there were only five (Kuisma, 2008). After centralizing operations, these companies needed another way to increase productivity. The focus was switched abroad, to global markets and this time not only for trading, but also for actual manufacture. Currently, 60% of the Finnish paper production capacity is located outside Finland, and the Finnish concerns are the largest in the world. We can also see this from the fact that in the 1990's southeastern Finland had the largest concentration of pulp and paper production in the world, and now the largest production is in China (Metsäteollisuus, 2011).

This change has meant that the fairly small paper and pulp mills in the middle of Finnish forests, which for decades had offered employment, housing, healthcare, recreational activities, etc. from generation to generation have become large international concerns with headquarters far removed from the mill locations together with mills situated in all corners of the globe (Kuisma, 2008; Jensen-Eriksen, 2007).

When a major industry in a country undergoes these types of multifaceted changes, they naturally influence education as well. Consequently, internationalization has become one of the goals of Finnish universities, as well as elsewhere. The idea is not only to attract international students to Finland, but also to prepare Finnish students for the exceedingly globalized working life, which results from these changes. International Master's Programs are part of any university's curriculum, and they generally mean that teaching in those programs takes place in English.

1.2 English-medium Instruction

In 2002, Wächter and Maiworm reported that Finland, together with the Netherlands, is a country where all universities offer at least one English-medium program. The same report found that 700 of the 1558 Higher Education Institutions (HEI) included in their study offered an English-medium program in 2002. In 2008, Wächter and Maiworm found that English-medium Instruction (EMI) is something HEIs see as normal rather than an exception, as already 2400 HEIs offered an English-medium program during 2008.

Since internationalization as a university goal includes not only international students and EMI but also international professors and lecturers, EMI programs resemble the work environment in today's international corporations. Similar to these internationally operating companies, students and lecturers use English as their lingua franca (ELF) when communicating. Even when most students attending a lecture as well as the lecturer may share a native language (in this case Finnish), in these EMI programs some of the participants are international students and, therefore, the language used in lectures is ELF.

1.3 Changes in a Master's Program

Due to the aforementioned changes in forest-based industries in Finland, it was deemed necessary to implement an EMI Master's program in the Department of Forest Products Technology at the former Helsinki University of Technology (TKK), now Aalto University[5]. This change was not seen only as positive, and especially students who had already begun their Bachelor's level studies felt the change could create problems (Pynnönen, 2005).

The illustration below (Figure 1.2) depicts the above mentioned Master's Program. The small circles inside the larger oval illustrate various activities, such as lectures, laboratory exercises, thesis presentations, and other similar academic functions within this Master's Program. This illustration will be used in Section 3.2.3 to show how the research data was first selected and then categorized. Here it provides an idea how this Master's Program was viewed in its neutral state, at the beginning of this study.

[5] Aalto University was established 2010 through a merger of three Finnish universities: Helsinki School of Economics, Helsinki University of Technology, and The University of Arts and Design Helsinki. Further information available at http://www.aalto.fi/en/about/.

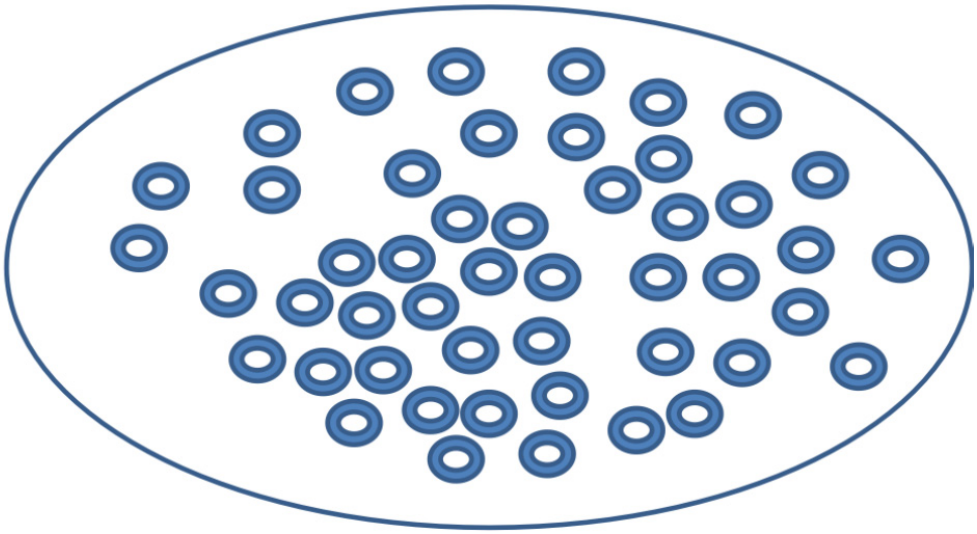

Figure 1.2 Depiction of a Master's Program with its Various Activities in its Neutral State

The mentioned activities can be seen as different genres (further details on this in Section 2.1.1) which are in use and are formed within the Master's Program.

Since this EMI Master's Program was partially funded by the Forest-based Industries (FBI) (Mauno et al., 2007), these funds allowed the program developers to assemble supportive measures in order to help both students and lecturers in this new situation. One of these measures was to hire a support person for English to assist lecturers with their lecture materials and to organize English courses for both the general personnel and specifically for the lecturers.

Though industry was a strong supporter of the new, EMI Master's Program, several other aspects also influenced the development of this Master's Program. These are depicted in Figure 1.3.

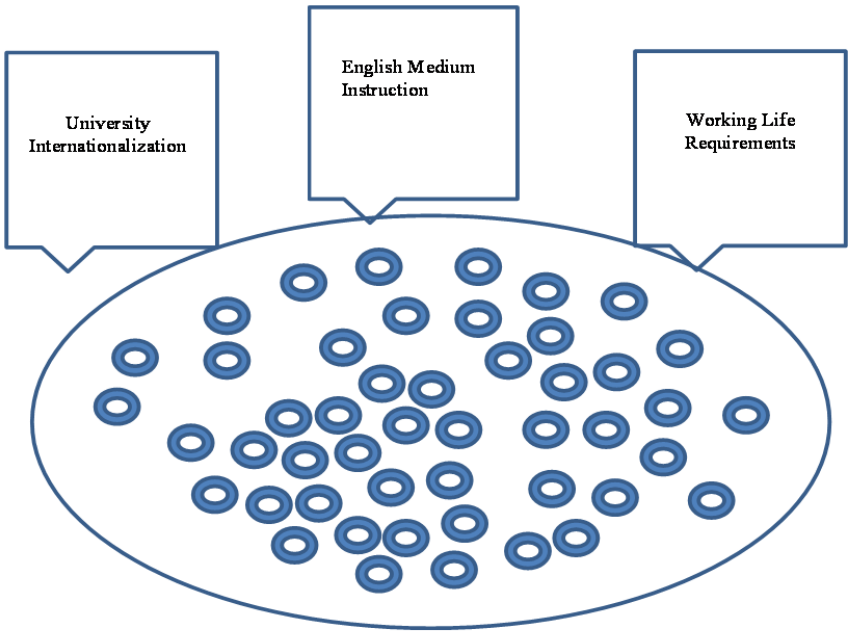

Figure 1.3 Administrative, Educational, and Societal Aspects Related to the Master's Program

This Master's Program was one of the first EMI programs at TKK and still the only one where teaching is only in English, with no parallel courses run in either Finnish or Swedish[6][7]. Due to the administrative, educational, and societal aspects, and the industry-provided funding, the program developers were able to develop a program with various support structures. These structures enhanced the implementation of the program.

At this point, I was asked to provide the department workshops, individual tutoring and other such means to help the personnel with their English use in terms of the new Master's Program. Based on my previous work experience within Forest-based Industries (FBI), I had a notion of what would be expected of the engineers graduating and finding work within FBI, I conducted a survey among the members of Paper Association Engineers. This

[6] Finnish and Swedish are the official languages in Finland. http://www.om.fi/20802.htm
[7]The TKK General Degree Regulation Chapter 8, Section 62 (Dec. 13, 2004) states that the language of studies can be English only, when so confirmed by the program.

on-line survey gathered information on the respondents' use of English and whether they encountered problems with it. The results of this survey confirmed my expectations: most respondents used English daily or weekly, mostly with non-native speakers of English, and mostly for spoken language (Suviniitty, 2007)[8]. From this perspective, EMI seemed to serve its purpose.

From covering the potential future for the students once they enter the working world, I had to investigate their present as well. Thus, as the support person, next I was to "evaluate the lecturers' English", which is how the task was described by the Head of the Department. In order to do that, I video-recorded twenty-two lectures and gathered students' feedback on each videoed lecture immediately after the lecture on paper-based questionnaires. Since the subject matter discussed during the lectures was not within my expertise, I felt that, in addition to my view on these lectures, it was appropriate to obtain the target audience's perception on the lectures as well. The material gathered in this manner is the data for the present study.

The student feedback gathered was primarily used to rank the investigated lectures. The lectures were ranked from challenging to accessible based on students' feedback on the questionnaires. After this, three challenging lectures and three accessible lectures were transcribed. This allowed a more thorough investigation of the discourse features which were located, described, and analyzed with methods deriving from discourse analysis. My goal was to determine what discourse features were used and whether they were used differently in the challenging and accessible lectures as well as to see whether the presence of dialogue between the lecturer and the students in the lecture would influence its accessibility.

Lectures themselves can be defined as a specific genre. According to Swales (1990), genre is realized in discourse communities with a mutual communicative goal. This definition

[8] Available online: http://icee2007.dei.uc.pt/proceedings/papers/211.pdf

matches with what takes place in lectures. Although there are cultural differences regarding how students and lecturers view lectures, Mauranen (2006:105) points out that despite the differences, common features are also found in lectures as well as in their use in academia.

Previous studies on similar data have either included both self-collected material as well as existing corpus data, or only the latter (e.g. Fortuño, 2006). Some studies have used naturally occurring speech while others have resorted to simulated speech events (e.g. Lesznyák, 2004). The present study was conducted for a pragmatic purpose and is based on self-collected, naturally occurring speech in lectures, with student feedback on lectures. It, therefore, provides a multi-level approach to EMI.

There are also studies addressing comprehension (Mason, 1994; Chaudron et al., 1994), several of them focusing on NS lecturers, NNS audiences. Some have concluded that lectures held in the audience's native language would ensure better comprehension (Hellekjaer, 2010; Airey, 2009). The present study also examines two lectures held in Finnish, the native language of both these lecturers and the audiences. These two lecturers were the same ones included in the EMI investigation where they lectured in an ELF situation with international students present. In two instances, these lecturers knew they would not have international students attending and, thus, they chose to lecture in Finnish. The objective of video-recording the Finnish lectures was to determine whether the use of discourse features in those lectures held in ELF and these held in Finnish differed in some way.

In addition to being a dissertation, this study is an extended report on an investigation which began in 2005 with video-recording lectures and collecting student feedback "to evaluate the lecturers' English." Naturally, this study should be of interest to the evaluated lecturers and the department as a whole. Regardless of the subject matter, the present study should interest all tertiary-level lecturers to see how students view interaction and interactional features in lectures and how we can improve students' perceptions of lecture comprehensibility.

1.4 An Overview of the Present Study

Student perception of the lectures is the starting point of the present study. Since the students, once in the working world, will be faced with ELF situations, the lectures are seen as not only part of academia, but also important in preparing the students for their futures. Although comprehension is not the main focus, students' perception of comprehension is examined. This study is concerned with features selected by comparing those lectures which, according to students' feedback, were at the opposite ends of the challenging/accessible continuum.

These features were selected as the focus after noticing the vast difference in their use in the lectures at the two ends of the continuum. This study is concerned with how the use of specific interactional features—control acts, questions, and repetition—is reflected in students' perception of lectures. They are also features which are present in speech regardless of the genre or text type and have been noticed to influence comprehension.

The present study is currently the only one using naturally occurring ELF data and triangulating three interactional features—control acts, questions, and repetition—while considering student perception of the data. Nevertheless, these discourse features have been examined in previous studies (Mauranen, 2006; Crawford Camiciottoli, 2008; Crawford Camiciottoli, 2004; Thompson, 1998). However, these studies focus on these elements separately whereas the present study advances research by focusing on these elements simultaneously.

The study is a qualitative, descriptive case study of the EMI Master's Program. The analysis draws on genre and discourse analysis and views academic lectures as a discourse community. Transcribed lectures were examined and analyzed for interactional features for their quality: how were these features used in different situations and by different lecturers. Were there differences between their uses in those lectures which students found accessible when compared to those which students perceived challenging? Some simple quantitative comparisons were also conducted to support the perception of differences in these lectures.

The theoretical issues will be discussed in more detail in Chapter 2, which provides a general theoretical background. The materials and methods are reviewed in Chapter 3 by first focusing on the phases of the study and then examining the model of the analysis. Chapter 4 provides an analysis on working life English as well as a comparison of the Finnish and the international Master's Programs. This chapter ends with an overview of the international Master's Program. Chapters 5, 6, and 7 include the analyses of the interactional features—control acts, questions, and repetition— on which this study focuses. Chapter 8 presents a comparison to these features in Finnish lectures together with a summary of findings. The final chapter, Chapter 9, discusses the findings, presents conclusions, and suggests ideas for future work and pedagogical applications.

2. Genre, Interaction, and ELF

The starting point of the present study is based on genre, interaction, and ELF and, since they can be viewed from various perspectives, their definitions in respect to the present study provide its framework. Genre and interaction represent the most investigated, mature concepts of these three while ELF has been investigated for little over a decade, though its longevity in use is centuries. Both genre and interaction as terms are also employed in many different fields: genre refers to, for example, different types or classes of music while interaction is studied, among other fields, in chemistry and physics.

Although genre is not the main focus of investigation in the present study, it is necessary to describe it in order for the reader to grasp an idea of the stage where the examined action occurs.

This chapter begins with the definition of genre in Section 2.1, after which genre in academic community and lecture as a genre are described. In 2.2 interaction is specified in relation to discourse, involvement, and lecture. Section 2.3 focuses on English as a lingua franca in general, regarding comprehension and in university education setting.

2.1 Genre

Genre can be seen as social or linguistic activity with a set of criteria which is used to categorize it. Genres are defined based on external criteria, such as content and function, and they are also used for categorization in other fields, e.g. music and visual arts.

One of the first scholars to introduce the notion of speech genres was Mikhail Bakhtin (1986) who saw that the way people speak differs according to the social context in which the speech occurs. He discerned that speech events were always connected with interaction which in turn provides the social context and through that modifies the way we use language. It is easy to note that the way people speak during a family conversation usually differs greatly from the way we use language in a university lecture. The social context provides the guidelines on how language is used in the various situations we encounter. This type of language use is acquired through mimicking others, more experienced in the

specific social context. As people mature and become involved in various interactional groups by first moving from their home environment to possible day care and schools and further to their places of employment, as well as other interest groups (e.g. dance class, arts group, sports club), they develop more varied repertoires of genres in their speech. Fairclough's (2003) model adopted Bakhtin's lines of thinking regarding how social context influences the way people interact with each other.

Some scholars, however, conceptualized genre through other means than social context. Biber (1988) used corpus analysis to find how different linguistic features are distributed in different genres and defined them in his publications. Charaudeau and Maingueneau (2002: 278-80) also determined text genre by its linguistic function, formal traits, textual organization and relation of communicative situation to formal and organizational traits of the text. Based on the notion of social context, defining genres may prove an elusive task since certain characteristics and linguistic features of a genre can be found in other genres as well. This may have encouraged these scholars to find more specific criteria to define the classification elements.

Swales (1990) described genres as conventionalized text types used by specific discourse communities. In addition to genre being a kind social action, he viewed it as discourse designed to achieve a set of communicative purposes and saw that the discourse community is defined by the mutual goal of that community. This type of action-based approach to genre, in addition to his idea of each genre consisting of identifiable stages, added another perspective to genre studies. Swales (ibid.) further suggested that a university teaching group would not necessarily qualify as a discourse community, unless it was a group of advanced students with prior knowledge of the community and its goals. Prior knowledge, according to Swales (ibid.), is knowledge we have obtained based on our prior experiences. These experiences influence our expectations as well as how and what we understand in a specific situation.

On reviewing Swales's notions on genre, Mauranen (1993: 15) stated that "in reality the reverse of Swales's suggestion seems to be true: it is the genre which defines or selects its user group rather than the other way round". Being a member of an academic community is

realized through participating in academic genres, whether in one's own discipline or elsewhere within the academic community. Considering the academic community, all of its participants have gone through some type of a selection criterion to participate in the academic genres which supports Mauranen's view on genre as the definer or selector. Those in the academic community conform to the existing norms and social formations and changing these would require time, effort, and strong justification.

Some scholars viewed genres and registers as synonyms (Halliday, 1978; Frow, 1980) while others, for example Martin (1985) and Ventola (1987), distinguished genres from registers very clearly. Martin's view was that genres are realized through registers and registers in turn are realized through languages. Figure 2.1 below illustrates how genre is realized through language and language in turn reflects the genre in which it is used.

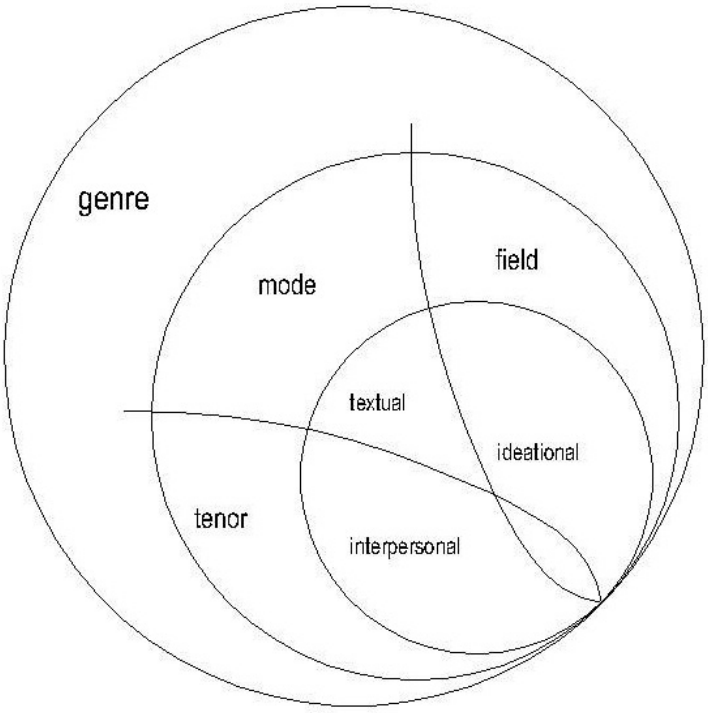

Figure 2.1 Genre as an Additional Stratum of Analysis (Martin and Rose, 2008: 17)

One genre, thus, may contain elements from tenor, mode, and field which differ partly or completely when we analyze another genre.

Bhatia (1993: 24) noted that the rules and conventions which govern genres are usually "implicitly understood and unconsciously followed by the participants in that communicative situation in which the genre in question is used". However, in some institutional contexts they may be explicitly enforced (e.g. court proceedings and even religious ceremonies). Bhatia also defined three levels in which genre is linguistically analyzed: 1) Lexico-grammatical features, 2) Text-patterning or textualization, and 3) Structural interpretation. Bhatia's integrative view brings together both the contextual aspect of genre as well as the more formal features of it. Bhatia (2002) has further provided a multi-perspective model, illustrated below (Figure 2.2) for applied genre analysis. This takes into account the context of genre not only regarding the text construction but also through the interpretation of that text.

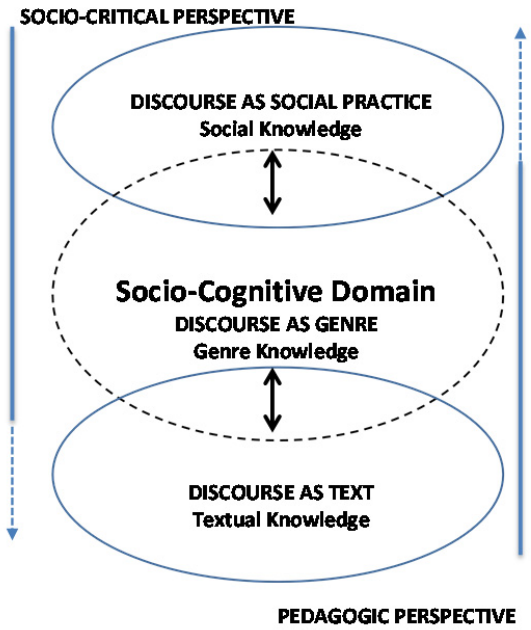

Figure 2.2 Perspectives on Discourse and Genre (Bhatia, 2002: 14)

Bhatia's view placed genre in the middle of the three perspectives while Martin and Rose (2008) placed it almost as a superordinate within which choices on field, mode and tenor as well as interpersonal, textual, and ideational are conducted.

The present study views genre as a multidimensional stage or platform where specific social action (e.g. lecturing) occurs through a variety of means (interaction, English as a lingua franca). The way in which this action is conducted is regulated based on the generic conventions which are passed on from the long-standing members of this genre community to its newcomers.

2.1.1 Genre in Academic Community

Based on Swales (1990), genre analysis provides a useful tool to group together texts with correlations in their audience, purpose, and form. These different groups can then be analyzed to see the differences and similarities between them. When we look at genre in academic communities, we can see similarities across disciplines as well as notable differences in language use between, for example, research groups even within the same disciplines (Swales, 1998). The discourse community provides a frame of reference to similarities within academic genres.

Bhatia's (2004: 57-59) notion of genre colonies aims at describing relationships between different genres as well as taking into consideration their sometimes blurred borders. Bhatia viewed some genres as hybrids which have elements from two or more original genres. This formation may be the result of colonization of one genre by another. Bhatia's example described how arbitration starts to resemble litigation due to the presence of legal advisors in arbitration. These would be the same people in actual litigation and thus influence the genre. The genre colonies and hybrid genres are illustrated in Figure 2.3 below.

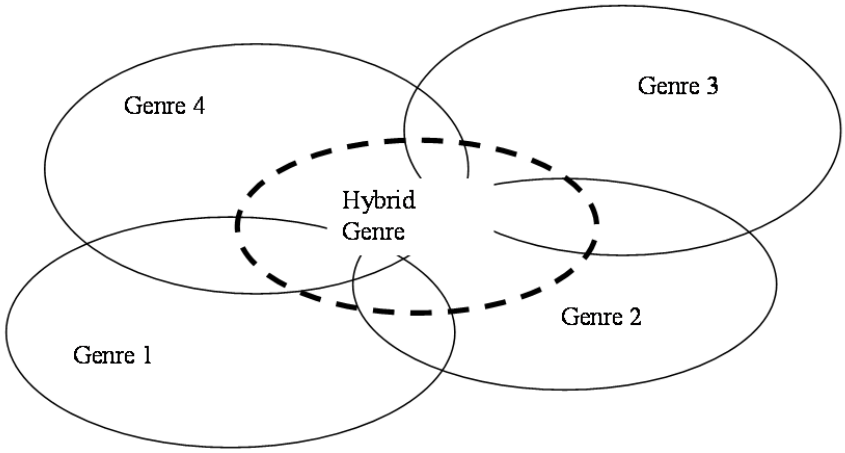

Figure 2.3 Genre Colonies and Hybrid Genre Based on Bhatia (2004)

Within the academic community, this type of hybrid genre may form when there are close ties to industry with visiting lecturers and experts. The internationalization goal may also influence the formation of hybrid genres when personnel, even within the same laboratory or research group, come from very different backgrounds and universities and influence the existing genre. In these situations, Mauranen's (1993) and Swales's (1990) views on academic genres meet: the groups within academia have gone through a selection criteria, which influences the formation of the genre. Simultaneously, the members of the speech community bring their own expertise and approach into it and it is formed according to these conventions.

2.1.2 Lecture Genre

Since genre in the present study is seen as the stage where a specific type of social action occurs, conventions typical for lectures need to be determined. The functions of a lecture include the most obvious: relaying information, but also other, not as obvious ones: working towards a common goal, preparation for working life, and socializing students into the scientific community (Benson, 1994; Dudley-Evans, 1994; Lynch, 1994). It is seen as an economical manner to provide information to fairly large groups of students while employing one or a few lecturers and their assistants. According to Flowerdew (1994: 1), it

"remains the central instructional activity" at the tertiary educational level. Lectures have a long tradition in the academic world as even in the medieval university professors would read their lecture notes to their audience, the students. Bligh (2000), among others, argued that lectures should be changed to a more interactive forum of discussion, but so far the academic lecture remains the main venue of teaching in academia.

Lecturers are the controlling actors during lectures and guide the students through what they see pertinent to the lecture. There is a degree of power difference which takes the lecture genre close to other monologues, such as a priest's speech during a church ceremony. Similar to a priest, a lecturer is seen to have a higher status than the students. Lecturing also relates to the narrative tradition as people have always told stories in all genres. According to Bhatia (2002), genres, like any texts and language conventions, reflect cross-cultural variation and this cultural influence also manifests itself in lectures. Mauranen's (1994) study on exchange students' expectations and experiences of Finnish lectures showed that, despite many similarities, there are also differences which can be unexpected to the students. This relates to what Swales (1990) saw as prior knowledge. Somewhat similar to this is Benson's approach to lectures and learning through them, as he viewed lectures to be their own specific culture with its

> own structures, contexts, rituals, universals, significant symbols, roles, status markers, patterns of behavior, beliefs, values, assumption, attitudes and even the allocation of praise and blame (1994: 181).

Benson's ethnographic approach recognized that international students may be more familiar with a different lecturing culture from what he referred to as the Western lecture culture. Swales's example on prior knowledge and how it influences communication was from a dry cleaner's, where the customer service agent did not act and speak according to the customer's expectation, which led to miscommunication despite the simplicity of the encounter. This type of situation is easily transferable to lectures. Our expectations on what will occur during a lecture will influence how we understand the message delivered.

Lecture Structure

Sinclair and Coulthard's (1975, 1992) model on discourse structure is the basis for an analysis on the structure of academic lectures from the 1970's. Curiously, the data they used to develop this model was collected in primary schools. This model has been used in analysis of both spoken and written texts. In its simplified form, starting at the top of the hierarchy, each level (Lesson, Transaction, Exchange, Move, and Act) consists of elements at the rank below. This model was used by Swales (1990), though he converted it to written texts and changed the term *transactions* into *moves*. Coulthard and Montgomery (1981) also applied this model to lectures and provided a framework which consists of four ranks: Lecture, Transaction, Sequence, and Member. In this model, Transaction is characterized by its focusing boundaries, Sequence by phonological means, and Member syntactically. The ranks are illustrated in Figure 2.4 below.

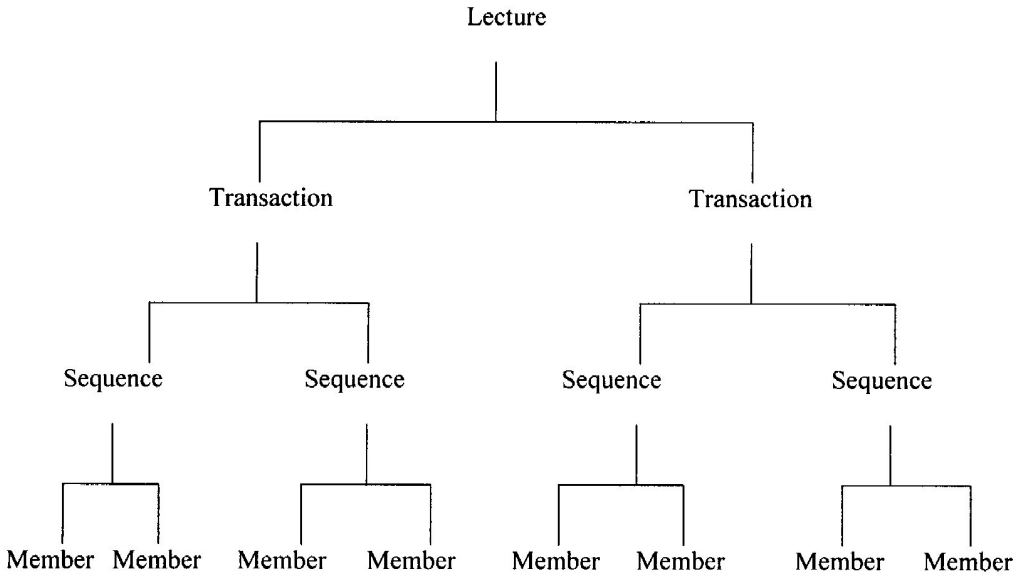

Figure 2.4 Rank structure for lectures (adapted from Cutting, 2002)

A lecture consists of several Transactions and not only two as in the illustration. Further in their model, Coulthard and Montgomery defined Members in two categories: those which function on the "main discourse" (informative) level:

do you know who gives those qualities for effluent[9]

and those whose activity functions on a "subsidiary discourse" (metapragmatic) level:

i think it is time to stop now

This ranking model illustrates the basic structure of a lecture and provides a way to categorize its various parts.

Young, in her (1994) study, examined the macro and micro structures of university lectures. She used a corpus containing seven two-hour university lectures. Three of these were delivered by NNSs of English while the others were by NSs in North American universities. Young described the macro-structure of a lecture as "strands" or "phases". She distinguishes six phases divided in two groups: three metadiscoursal phases which comment on the discourse itself and the other three which, according to Young, "mark university lectures" (1994: 167). The first three metadiscoursal phases were (Young, 1994: 166):

1. Discourse structuring phase: lecturers indicate the direction that they will take in the lecture.

> today what i'm going to give you is the *summary lecture of this whole course* and, and after this, this lessons you know *how you can give answer to the exam*
>
> AL21

2. Conclusion phase: lecturers summarize points they have made throughout the discourse.

[9] All examples, unless otherwise stated, are from the present data.

> okay i think that this *this is enough* for *this process water treatment* er course as a summary summary do you have any questions concerning this course
>
> AL21

3. Evaluation phase: lecturers reinforce each of the other mentioned phases through an evaluation of information which will be or has been provided.

> this figure shows you the potential of different kind of precipitation in in er er chemical pulping or in paper making processes and *why this is very good figure* it shows you first that the ph-range and then it shows you
>
> L05

The first two of these metadiscoursal phases are more frequent than the last one. The use of metadiscourse in academic speech in general is quite common (Mauranen, 2004; Ädel and Mauranen, 2010). In addition to the metadiscoursal phases, Young (1994: 167) has identified three other phases which are more specifically related to the actual lecture content.

1. Interaction phase: to maintain contact with the audience, both to reduce the distance and to ensure comprehension.

> L: concerning this process water treatment,
> er and last week you have, lecturer who was given by, by [NAME] is it true
> S2: yes
> L: and what was the topic then.
> S2: sludge treatment, and –
>
> AL21

2. Theory or Content: to reflect the lecturer's purpose, which is to transmit theoretical information.

> as you know, most of them are polymers, and therefore, it is very important to understand *how polymers behave in water, in solution, and how they absorb to different kind of surfaces*
>
> L19

3. Examples: to illustrate theoretical concepts through concrete examples familiar to students.

> you know why we use these nutrients, because for @the same reasons@ because they have to have those those biological activity and those factorials and and other other things *they need some food they need to eat something*
>
> AL21

Young concluded that using phases provides a more accurate image of university lectures than when presenting the macro-structure of a lecture in terms of outlines, such as the previously presented ranks. Despite the difference in descriptions, Young seemed to follow the early researchers in this aspect and her model resembles Swales's (1990) structure of research article introductions, which was, however, a single-level analysis and based on the more complex Sinclair and Coulthard (1975) model originally. When Young (1994: 173) referred to the lecture genre, she stated: "phasal analysis seems to offer a more realistic portrayal of the nature of this particular genre". The major drawback of this model is its narrow view on the purpose of lectures and lecturers. As mentioned above, there are other, usually more covert purposes for lectures, in addition to the overt one of conveying theoretical information.

Regardless of the analysis style, it is clear that lectures have various purposes and several strands of topics. Whether these topics are called transactions or phases is less important here. For the purpose of the present study, it is important to recognize that lectures contain different types of communication (e.g. monologue, dialogue, polylogue) and that multiple topics are discussed and managed during lectures. Furthermore, lectures, just like lecturers, differ from each other, but despite these differences, they can be categorized in the same genre.

Lecturing Styles

When we view lectures in more detail, we can see that a number of lecturing styles have been identified. Morrison (1974, reported in Jordan, 1989: 153) distinguished formal and informal lectures among science lectures. This appears quite a simple distinction of various lecturing styles. Goffman (1981) defined three *modes* of lectures: "memorization", "reading aloud", and "fresh talk". The names given to the modes indicate what types of lectures are identified. "Memorization" refers to a lecture where lecturer does not actually read his/her script, but follows it closely and thus it is almost identical to "reading aloud" lecture.

During the “fresh talk” lecture, the lecturer speaks freely of the topic at hand perhaps using either notes or slides as a guide throughout the lecture. Dudley-Evans and Johns (1981) identified three lecturing *styles*: “reading style” (similar to Goffman’s “reading aloud”); the “conversational style”, which is close to Goffman’s “fresh talk” mode; and the “rhetorical style”, where the lecturer is a performer who uses rhetorical elements (e.g. intonation variation, marked shifts of key and tempo) and has a thoroughly planned outline and thus is fairly close to Goffman’s “memorization” mode. Frederick (1986) spoke of a “participatory lecture” which is closer to discussion and aims at activating the students in various ways, including questions, pair discussions, and an anonymous feedback opportunity at the end of a lecture. Benson (1994) and Swales (2004) have suggested that lectures, especially in the United States, are becoming more interactive. Swales has defined this type “open style” lecturing and it is characterized by lecturers not reading from their lecture notes, but using an outline or simply their lecture slides as a guide when they speak. Goffman (1981) already referred to this style as “fresh talk” and Dudley-Evans and Johns (1981) as “conversational style”.

Salezahdeh (2005) pointed out that the advantage of an “open style” lecturing is that the listeners and the speaker have a more direct connection in this type of a lecture, but also cautioned that the listeners may have difficulties in following this type of an interactive lecture as well as the typically “ungrammatical phrases” common in spoken language. This latter caution seems unwarranted taking into consideration the differences between written grammar and spoken language grammar (Biber 1988, Biber et al., 1999), which both are descriptive of their perspective features. Therefore, the written language grammar should not be seen as superior to the spoken one.

Chafe (2006) compared comprehension of speech, written text and reading aloud. This relates to the “open style” lecturing. Chafe’s study indicated that the texts which were written to be read were the most difficult to understand when read aloud. Chafe spoke of listenability and his study concluded that listening to spoken language makes the reception easy, reading a written text is somewhat harder while listening to reading aloud makes the reception the hardest. Therefore, the features Salezahdeh (2005) claimed to be problematic

for the audience, according to Chafe's (2006) study, actually aid in listenability and thus in the comprehension of the lecture.

Lectures at least in the English-speaking universities, according to Benson (1994), are becoming less formal and more interactive with the role of the lecturer as more of a "facilitator" and a "guide" with "open style" lecturing which allows for better comprehension. This is the mainstream and preferred style in Finland as well, including Aalto University (Hyppönen and Lindén, 2009). Hyppönen and Lindén (2009: 46) recommended the following: "Instead of lecturing to passive students, the teacher should encourage the students to be active and interactive during the presentation".

The level of formality in Finnish universities is quite low, as most professors and lecturers are on first-name basis with their students, colleagues, and other staff. Therefore, the division between formal and informal is unnecessary. Naturally, even when on less formal terms, the actual formality varies. This could be a factor in lectures and will be referred to in the present study if necessary. To identify different lecturing styles, a combination of the above mentioned categories was chosen to ensure all styles in my material were covered. The lectures in the present study were, thus, categorized as "reading aloud" (very few, if any interruptions or invitations for students' questions), "rhetorical" (some chance for students intervention and questions), "conversational" (lecturer invites questions and comments from students), and "participatory" (lecturer uses many questions and almost forces students to participate in the lecture).

2.2 Interaction

At a very general level, interaction can be seen as the type of action where two or more objects, whether molecules, persons, or even an artist and a piece of art, affect each other in some way. Interaction is present between very small units, such as molecules, while even television programs can be interactive, i.e. the program viewers can influence, for example, which movie they would prefer to watch. Interaction is defined differently in different academic disciplines, and it is a focus of studies in most of them. In linguistics, interaction is examined from sociolinguistics and psycholinguistics to prosody and lexis. Since

interaction can also be paralinguistic (e.g., Gumperz, 1982), it has been examined by analyzing gazing, frowning, or other aspects of body language (Cappella, 1983; Patterson, 1983; Coker and Burgoon, 1987). The different ways in which interaction manifests itself, as well as the fields in which it occurs, have thus made it an attractive topic for research.

In addition to verbal and non-verbal, interaction can also be more or less overt. Most of the time, it is difficult for human beings to keep their reactions and thoughts completely unrevealed by avoiding all expression, but sometimes an audience or a panel of judges may be able to reveal no emotion despite the thoughts and feelings they experience. The most covert of these are almost impossible to examine without fairly sophisticated equipment to scan the heart rate, brain activity, and other such physiological functions, but facial expressions and other bodily movements are easily detectable. When we think of interaction, it is essential to realize the range of activities which result from it. Interaction manifests itself in many ways and it is perpetually present in overt and covert forms. This study aims to examine both of these forms of interaction.

2.2.1 Interaction in Discourse

Discourse as a concept covers all types of communication, both written and spoken. Tannen (1989: 6) defined discourse as "language beyond sentence". Interaction is present in discourse, to varying degrees. Bakhtin (1986) saw that all language use is dialogic and points out that if an utterance does not propagate a further utterance, then it is monologic. If we think of our encounters with any utterance, even in a monological setting, most of the time any text would generate responses, such as questions and comments, at least in our thoughts even if we do not express them aloud. In Bakhtin's view, when natural speech is removed from its context, it becomes monologic and unnatural while natural speech itself is dialogic and contains a sense of interaction, even in the case of written text or a speech event which is dominated by one or a few speakers, such as a lecture or a presentation. We may indeed have discussions in our minds with ourselves and when we read, we are affected by the text in one way or another, which, again, indicates how interaction manifests itself on many levels.

Levinson (2006) saw interaction as communication and stresses that humans are capable of communication even without a common language. Interaction is also an inherently human activity as "humans spend on average perhaps half of their waking hours in intense communicative interaction with each other" (2006: 90). Levinson further argued that produced speech is always a result of the interaction which occurs between speakers and their audiences as the speakers reformulate their speech and may even change the focus of their speech depending on the audiences' reactions.

Interaction is also present in written discourse (Widdowson, 1980; Hoey, 2000). Readers read texts through their personal experiences and approaches while the writers have written the text through their own. During the reading process, these perspectives meet somewhere and the result is interaction which depends on both the reader and the writer and even on the situation where the reading occurs. Most of us have experienced reading the same book at different points of our lives to discover how different our views are during these times. Widdowson (1979) spoke of meaning potential which is created through interaction between the text and the reader.

Interaction is a naturally occurring phenomenon (Schegloff, 1987). We also have certain expectations on what type of interaction should occur in various situations and, again, whether it is different from our expectation, we notice that as well (see Section 2.1 regarding Swales's, 1990, "prior knowledge"). Since interaction is such an essential part of discourse, it has also been investigated in great detail. The wider perspective on communication involves studies on sociolinguistics (Goffman, 1981; Potter, 1996; Van Dijk, 1997) and psycholinguistics (Levinson, 2005, 2006; Tomasello, 2003), which focus on speech events as a whole and how they are being shaped by their participants.

The more detail-oriented approaches to interaction include conversation analysis (Sacks et al., 1974; Drew and Heritage, 1992; Schegloff, 2007) and discourse analysis (Schiffrin, 1994; Schiffrin et al., 2001). These fields of study direct their attention to, for example, re-occurring patterns in, mostly, dialogues and have identified the sequential organization (e.g. turn-taking, repair, preference organization) of speech events. Turns in discourse have specific functions, such as starting, maintaining, and ending a conversation. In addition to

word-filled turns, pauses can also be seen as turns. The pauses may be silent (nothing is uttered) or filled (when some sort of an utterance, such as *erm* or *uh* is used to fill the pause) (Sacks et al., 1974). All these studies, regardless of their approach, indicate that interaction is present in different forms in all communicative situations.

Interaction is a fundamental element of communication. Coherence in communication is usually achieved through the use of specific strategies. In spoken language, coherence is upheld with, for example, repetition (of self and others), question-answer sequences, and feedback (Sinclair and Coulthard, 1975; Coulthard and Montgomery, 1981; Schegloff, 1987).

To study how these strategies are used and how they influence the level of interaction, texts can be analyzed in several ways. On the most general level, the structure of the discourse can be examined while the more detail-oriented studies focus on sentence-level analysis (Swales, 2004; Biber et al., 2007) or even single words or phrases, such as discourse markers (Schiffrin, 1994; Biber, 2006; Fortuño, 2006; Biber et al., 2007). This relates also to the flexible nature of an ongoing conversation: how it is "context-shaped" and "context-renewed" (Drew and Heritage, 1992: 18). Context refers to the conversation which is shaped by what precedes an utterance while it is renewed by each of them. Stenström (1984: 1) viewed questions and answers as the "backbone of conversation", which she further defined as an element that keeps the conversation going and is also used in the case of misunderstandings. Questions and answers also shape the conversation through interaction among interlocutors, which relates to their central role in monologic speaking as well (see Chapter 6).

Some of these features of spoken interaction are ubiquitous while others manifest themselves more in specific cultures and languages. Examining ELF situations, which will be discussed in more detail in Section 2.3, indicates that those participating in conversation work to find mutual understanding and that misunderstandings are successfully avoided despite different cultural backgrounds (Firth, 1990; Meierkord, 1998; Mauranen, 2006).

The less recent literature indicates concern regarding cultural aspects of communication. For example, Gumperz (1982) demonstrated the necessity for sociocultural knowledge for a successful interaction in communicative situations since turn-taking and other conversational principles may differ somewhat depending on the speakers' cultural background. Lehtonen and Sajavaara (1985) found that Finns are among those who can tolerate silence longer than many other nationalities and that they are not as eager to take the floor or initiate conversation as in other cultures, such as southern and central Europe. Tiittula's study (1993) on Finnish-German cultural differences in economic life suggested that Germans consider the Finnish communication style as an indication of reticence, reserve, and even aimlessness. These types of studies may not be as relevant today, as communication occurs, to a great extent, in international platforms since people travel and work abroad. This may diminish the cultural communicative variance among different nationalities.

2.2.2 Involvement

Tannen (1989) describes involvement as an internal association people feel towards certain people, places, things, and words. Involvement enhances the participants' engagement in the speech event as well as improves the flow of interaction. Involvement is also used to establish common ground in a speech event. Tannen further mentions the connection between the linguistic form and involvement. Stenström (1994) likewise states that interactional signals (e.g. *right, I see, yes that's right, you know*) involve the listener in the conversation, i.e. play a crucial role for a smooth interaction.

Involvement was also the focus of Chafe's (1982) study, which indicated that there are many ways to increase involvement and that this is accomplished quite naturally. Chafe compared the different levels of interaction contained in spoken and written language. Typical spoken language involvement contains fragmentation and active verb forms while written texts tend to be more detached and include integration and extensive use of passive verb forms. With fragmentation Chafe (1982: 38) meant how ideas are presented in spoken language in short and through somewhat simple forms which may or may not be connected with conjunctives. The opposite of this is the integration present in writing: much more

information and additional elements is packed into the presentation of ideas (Chafe 1982: 39). Fragmentation and integration reflect the nature of spoken and written languages: spoken discourse is linear with little time to process before and during production while written language can be planned and rewritten. Written texts are, according to Chafe (ibid.), more objective while spoken texts tend to be more subjective. This dichotomy appears, however, insufficient for a deeper understanding of different kinds of speaking.

Chafe (1982) suggested the following as the specific features of involvement: use of first and second person forms, monitoring of information flow, emphatic particles (e.g. *just*, *really*, *truly*, *certainly*, *indeed*), and fuzziness (e.g. *and so on*, *something like*, *sort of*, *kind of*, *in a way*). This type of approximation is also present, according to Chafe (1985), when a match between a word and a category is not according to our expectations, but remains unclear or undefinable. The way we use the listed features of involvement would naturally depend on the speech event and, thus, the genre in which they are used (see Section 2.1).

Chafe (1985: 116) listed three types of involvement in conversation: self-involvement of the speaker, interpersonal involvement between the speaker and the hearer and involvement of the speaker with what is being talked about. This leaves the hearer somewhat as a passive recipient since the hearer is mentioned only related to the speaker and the involvement of the hearer is not seen worth recognition.

A concept which resembles involvement is Bakhtin's (1986) addressivity, which he claimed to influence the way in which an audience reacts to the speaker. He further defined this by providing an example: if the speaker does not address his/her audience, the relationship remains distant and there is no real interaction. However, if the message is clearly directed to its audience, involvement and interaction increase.

Gumperz (1982) saw involvement as participation in a conversation. This participation may be either verbal or paralinguistic. Unlike Chafe, he also included the hearer's involvement in conversation. Gumperz described involvement as the basis for linguistic understanding. To be able to maintain conversational involvement, Gumperz felt the conversation parties need to share linguistic and sociocultural knowledge. He further pointed out that the

participation in a conversation is based on information inferred during the conversation. Furthermore, interaction expectations as well as the meaning of the utterances themselves influence involvement. This also relates to prior knowledge (Section 2.1) and may influence comprehension. However, it may not be based solely on cultural knowledge, as discussed above.

2.2.3 Lecture as an Example of an Interactive Speech Event

When we examine lectures, we can see that, despite their monologic appearance, they actually contain many interactive and even dialogic features. As discussed in Section 2.2.1, these features include questions and comments at least covertly if overt interaction is, for some reason, impossible (Bakhtin, 1986). Lectures are definitely targeted to an audience and that audience influences the way they are structured. According to Gumperz (1982), shared linguistic and sociocultural knowledge is required to maintain involvement. This knowledge may or may not be present in lectures, as it depends on whether students have prior knowledge on lectures and whether this prior knowledge is similar to the lecture they are attending.

Some studies have focused on how interaction manifests itself in various spoken situations and have found that the use of interactional devices enhances it. These devices include questions, personal pronouns, and asides, which all have been studied extensively (Bamford, 2005; Crawford Camiciottoli, 2005; Thompson, 1998; Sinclair and Coulthard, 1992). Control acts (Vine, 2004) (directives, requests, and advice) are also similar devices and they have been studied mostly in regular classrooms (Dalton-Puffer, 2003) and in parental talk (Bellinger and Gleason, 1982). Exemplification and repetition can also be seen as interactive features in lectures and they are included in Crawford Camiciottoli's (2007) study on business lectures, which, however, excludes control acts altogether. They are, nevertheless, seen as an integral part of CLIL teaching (Dalton-Puffer, 2003) as well as present in university lectures (Reppen, 2008).

Based on the categorizations and descriptive features listed above, when we examine lectures, we can see that they fall somewhere between written and spoken texts. The issues

discussed during the lecture are preplanned, but, in the conversational style lecture (see Section 2.1.2), the lecturer talks spontaneously about those preplanned issues. Since lectures convey factual information, the manner in which it is delivered is influenced by the generic conventions. The focus needs to be kept on information, which adds to their objectivity. These two aspects of lectures, spontaneous speech and objectivity due to the focus on information, which usually is fairly neutral, conflict with Chafe's view (1982) on involvement, since he claims spoken text to be more subjective than written text. An important feature regarding lectures and interaction is the audience (i.e. the hearers) and their involvement with the lecture topic. Chafe mentions the speaker's involvement, but the hearer's involvement also influences the interaction (e.g. Bakhtin, 1986; Gumperz, 1982). I argue that since involvement in spoken text is so inherent, despite their objectivity, lecturers use features to increase their interactivity while maintaining their scientific integrity.

When involvement is examined from the lecture viewpoint, we can see that, like in other speech events, the way the audience reacts to the lecturer influences the level of interaction during a lecture. If students stare at the lecturer with empty looks during the lecture, this may encourage or discourage the lecturer in activating the audience. If students look eager to hear about the lecture topic, this, again, may influence the way in which the topic is handled during the lecture.

As mentioned above (Gumperz, 1982) also speaks of shared linguistic and sociocultural knowledge in order to maintain conversational involvement. Although students and lecturers may not be using their native language, lectures in academia are a sociocultural setting of their own. Especially in later stages of their studies, students have been socialized into this sociocultural setting and know what to expect during lectures and also what is expected of them as an audience (see prior knowledge in genre, Section 2.1). This reflects Airey's (2009) findings on the differences between Bachelor's and Master's level students' ability to follow the lectures held in English. The Master's level students found far fewer difficulties with it than the Bachelor's level students.

Interaction manifests itself through various structures during a lecture. Since the lecture is intended for a specific type of an audience, even the focus on it shapes the way the lecture is planned. Lecture organization can be seen as another interactive device in lectures as Young's (1994) study indicated (see Section 2.1). Several studies have also defined lectures and their interactivity through the number of student/lecturer dialogues (Northcott, 2001; Csomay, 2002; Morell, 2004).

The views on interaction vary from a holistic approach, such as Bakhtin's (1986) addressivity, Chafe's (1982) and Gumperz's (1982) involvement to more specific features of lecture organization and dialogues present in them. All these theories show that both the speaker and the hearer influence the level of interactivity in lectures. This interactivity manifests itself on many levels through, e.g. speaker's linguistic choices to enhance involvement as well as through actual dialogues. I argue that a lecture can be seen as interactive even when there is less overt dialogue between the lecturer and students. Since so much of interaction occurs internally, for example, when a lecturer poses a rhetorical question which provokes thoughts in the audience, limiting interaction to turn-taking sequences or similar structures is insufficient when studying interaction in lectures.

Investigating lecture interaction involves bearing in mind the above mentioned ways in which interactivity is present in lectures. Therefore, lectures need to be viewed holistically, structurally, and lexically in order to obtain an impression of interaction present in them. Evidencing the manifestation of interaction even in those lectures which are monologic is possible through this approach.

Lecturers may point out issues requiring special attention through control acts. These control acts, since they are directed to the audience, enhance the level of involvement and interaction. They may be an efficient manner to interact with the audience, since lectures tend to remain fairly objective, which adds to the contrast of presented control acts. According to Reppen (2008), in university lectures directives, which are one category of control acts, are mostly used with organizational matters while Dalton-Puffer (2003) indicates that in the primary and secondary classrooms they are used in a similar manner as parental directives in Bellinger and Gleason's study (1982) (see Chapter 5).

In addition to control acts, use of questions facilitates lecturers in directing the lecture, as well as the audience's attention, where needed and, actually, in obtaining information on what the audience already knows and what may require further discussion. Questions presented during a lecture are not necessarily expected to be answered. Expressions, such as frowning or looking confused are, most of the time, used as cues by the lecturer on whether to move on or explain the topic at hand in more detail. Whether rhetorical or genuine questions, they still activate the audience to focus their thoughts on the presented question. Even without overt dialogue, this creates interaction in the lecture and may even encourage the audience to pose their own questions (see Chapter 6).

While control acts and questions are common in lectures, repetition is also used in speeches, teaching, and lectures for many reasons. Repetition can be seen as an emphatic device, similar to those listed by Chafe (1982) on involvement and as a typical feature of spoken language. Repetition, when it uses paraphrase, may also be used to ensure comprehension and to focus the audience's attention to an important aspect of a lecture. Tannen (1989: 9-12) highlights the importance of repetition in creating involvement which she sees as "an achievement in conversational interaction". Tannen (ibid.) also sees both roles, the speaker's and the listener's as active since listening requires interpretation (see Chapter 7).

All the above mentioned features are part of what Chafe (1982: 53-71) refers to as classroom talk, where teachers and learners jointly construct meanings through the talk they produce. Although Walsh (2006) claims that despite classroom talk having been studied and analyzed for the past 40 years, the increase in EMI (English-medium Instruction) and its influence need to be investigated. In addition to constructing meanings, the interactive devices can be seen as means to activate the audience as well as to facilitate the learning process.

Interaction can be viewed from a more holistic point of view or by examining specific textual elements or actions which create interaction (such as dialogue). Even without overt dialogue, lectures can be seen to include interactive features, such as control acts, questions, and repetition, which will be discussed in more detail in Chapters 5, 6, and 7, respectively.

2.3 English as a Lingua Franca

The term *lingua franca* is said to originate from the 1200's when the shared language emerged while the Arab-speaking traders needed to communicate with "Franks", i.e. Europeans or those people who did not speak Arabic languages. These traders developed a language with which they could communicate and do their business and called it Lingua Franca, the language of the Franks. This original lingua franca resembles a pidgin language in several aspects: it was used for trade, it was no one's native language, and it was constructed for a specific purpose (Adler, 1977). Although different hypotheses on the term's origin exist, this approximately describes the source of it. Since this original *lingua franca*, the term has been reserved to those native languages which are used as a vehicular language in situations where no other common language is found.

Today the most widespread lingua franca is English. According to Seidlhofer (2001: 141) non-native speakers of English (NNS) use it mostly with other NNSs and they have long outnumbered the native speakers (NS) (Graddol, 1997: 13; Crystal, 2003: 61). English is the basis for airspeak and seaspeak, specially devised communication systems from somewhat simplified versions of the original language. English also has a major role in academia, science, and business. The usage situations where English is used are high-stakes situations where comprehension and communication are essential. Furthermore, English is also present in popular music and movies, as well as in social media, which all are important to the world economy.

Despite the wide spread of English use by NNSs, or perhaps partly because of it, and although the situations in which English is used can be viewed as critical to their participants, such English is often referred to as Globish (Nerrière, 2004; McCrum, 2010). With Globish Nerrière and McCrum refer to a simplified version of English, which requires only approximately 1500 words and little attention to grammar or syntax. Globish, according to its promoters, is the salvation when traveling or doing business abroad and it is easier to understand than NS English. Mostly, however, this can be viewed as a thought experiment. Nevertheless, this type of view on English use seems to undermine ELF and its

importance and patronize its users who save lives and keep businesses flourishing, as well as develop new inventions and explore other scientific endeavors. In addition to Globish, English spoken by its NNSs is also seen as the last *lingua franca* (Ostler, 2010). In Ostler's opinion, technology for translations will soon be so advanced that it enables everyone to use their own languages and no *lingua francas* will be needed.

These popularized and provocative ideas on English show the interest people have in it. The more linguistically-oriented views on English are, however, also divided. Some fear that English, since it is used so widely and in such high-stakes situations, will "devour" other languages and their importance at least in some facets of life, such as science and education (Swales, 1997; Phillipson, 2009). Others see this spread of English throughout the world as a more neutral and beneficial issue (Crystal, 2003).

Whether English is seen as a useful tool or as a threat or something completely different, its use and influence are universal. When English is used among NNSs of it, it is defined as an international language (EIL) (Jenkins, 2000) or as lingua franca (ELF) (Haberland, 1989; Firth, 1990). The concept EIL, in its widest sense, refers to English which is used in all of Kachru's concentric circles (1985)[10]. In other words, it is English used in international settings among all kinds of English speakers, both native and non-native. Widdowson (1997, 1998) spoke of EIL as a mostly written register which is used for international, academic, and professional purposes.

In its purest sense, ELF refers to communication among those who do not share a common language (House, 1999; Seidlhofer, 2001; Mauranen, 2005). Native speakers of English may or may not be present in a communication event in ELF; however, for research purposes, data collected as ELF data does not contain much NS communication. As with all language use, a certain degree of fuzziness has to be accepted.

[10] Kachru's (1985) circles briefly: inner circle (native English, e.g. Britain, Australia, the United States), outer circle (English as a second language, e.g. India, South Africa, Nigeria), and expanding circle (English as a foreign language, e.g. Israel, Japan, Scandinavian countries)

In addition to the above mentioned concerns regarding the influence of English on other languages, there is also fear that the non-standard forms and use of ELF influence English as a native language (ENL) and, therefore, also deteriorate English taught as a foreign language. This view regards only a monolithic, standardized model of English as the one which ensures comprehension among those who speak English (Quirk, 1990; Cheville, 1993; Chesire, 1991). Despite the changes which have occurred with increasing globalization, social media, and the spread of English since the early 1990's, an even stricter view on *lingua francas* was offered by Trimnell (2005: 20):

> The tendency toward linguistic degeneration underlines a key limitation of any lingua franca. When native speakers of the language are not present, second-language speakers tend to modify the language at will.

Despite providing such a condescending view on lingua francas, Trimnell's work does not include any of the recent studies on ELF, which offer entirely opposite views on both lingua franca and its users.

In addition to ELF and its definitions, benefits, and drawbacks, also the ownership of English is a debated issue. Since English is used in such diverse situations by people with various linguistic and other backgrounds, can English really be connected only to those backgrounds in which English is spoken as a native language? Widdowson (1994) claims that English belongs as rightfully to them who use English as a foreign language (EFL), as it belongs to its native speakers. Crystal (2003), Nunan (2001), and Graddol (1997) speak of English as a global language which refers to it being used and, according to Widdowson, also owned globally.

The first term for a universal version of English is World English, which first appeared in the 1920's (McArthur, 2001). This term refers to English used around the world, but does not address the users' backgrounds and it should not be confused with World Englishes, a concept of different, defined, legitimized varieties of English (Jenkins, 2003). World Englishes would roughly be Englishes spoken in Kachru's (1985) outer circle countries. One can argue whether national borders influence linguistic varieties, but this is beyond the focus of the present study. Yet another definition of World English is by Brutt-Griffler,

whose (2002) work relates to World English as a phase in the history of the English language and it stresses the various roles English holds in the world and among its users (economy and commerce, an empowering lingua franca, language change, and bilingualism).

ELF has been researched for little over a decade. The first studies of what can be considered ELF, include investigations on international use of English by Knapp (1987) and Haberland (1989). Firth (1996) and Meierkord (1998) already spoke of ELF. These studies are mostly descriptive and fairly small-scale, but provide important information on ELF and its use. Studies of ELF have increased continuously with Jenkins's (2000) seminal study on the phonology of ELF, Mauranen's (2003, 2005, 2006) studies on ELF in academia—The ELFA Corpus—, and Seidlhofer's (2001) VOICE corpus collection and studies on spoken European ELF. Furthermore, Seidlhofer's (2005) discussion on ELF provides general concepts and principles on what ELF is as well as on studies and findings on it. These findings are further defined in Seidlhofer's (2011) more recent study, the concepts in which are exemplified through excerpts from the above mentioned VOICE corpus. These different approaches in researching ELF allow for a comprehensive description of it and its features.

Another general aspect on ELF is based on House (2003), who spoke of languages which are means for communication and those which are means for identity. According to her, our native languages are those which identify who we are while we use *lingua francas*, such as English, as means of communication in situations where communication in our native languages is not possible. In this respect, ELF would be a language for communication while we preserve the other languages for identification. This may, for example, keep a business meeting or negotiation more neutral than when native languages are used, since ELF is a functional tool without a heavy emotional burden. ELF also helps in maintaining equality: in a negotiation where the participants come from different language backgrounds, it puts everyone at the same level when no one speaks their native language, but all speak ELF.

When we think of ELF and the situations in which it is used, we realize that it is used in high-stakes situations: in business, politics, media, technology, and science. This type of language use results in high requirements regarding the vocabulary and comprehension and influences its development. Although the pronunciation and perhaps even structures in ELF may be simplified compared to English as a Native Language (ENL), it does not mean that "anything goes" in ELF or that when native speakers are not present, the language is "modified at will" (Trimnell, 2005: 20). House (1999) also pointed out that since the use of ELF occurs in these high-stakes situations we may discover that ELF is actually sophisticated and versatile, even if it differs from ENL.

The present study uses the ELF concept for situations where the communication is mostly[11] among non-native speakers (NNS) of English and leaves the EIL concept for those situations where non-native speakers and native speakers (NS) of English are more or less *equally* present.

2.3.1 ELF and Comprehension

Text comprehension is a multi-level process in which many aspects influence participants. Even in written text, we can name five levels which influence our comprehension: surface code, textbase, situation model (Van Dijk and Kintsch, 1983) communication, and text genre levels (Graesser, 1997). Surface code is retained only for the most recent clause while the textbase is referred to as the basic meaning without the exact wording and syntax. The situation model provides the model on what the text is about. The communication level refers to the pragmatic context of the text and the genre to the type of text.

It is important to remember that spoken interaction is the primary mode of existence for human language. Speech is encoded in a form of sound, it is linear, and real time, which results in its differences from written language (see Section 2.2.2 on fragmentation). In speech situations, our comprehension is also dependent on our hearing and memory, as well

[11] The situation is still seen as ELF communication if the majority of speakers are NNSs of English.

as the way in which the message is spoken, not to mention accents, dialogues, interference, and other such features. Rost (2002) lists four orientations—receptive, constructive, collaborative, and transformative—which are active when listeners comprehend what they hear.

Language comprehension involves both linguistic and non-linguistic elements and it has been debated whether we process these elements bottom-up (Morley, 2002), i.e. from the phonemes further to lexis, syntax, semantics and discourse structure, or top-down (Buck, 1994) based on expectations of the topic, context, and general knowledge. The more recent studies, such as the one by Flowerdew and Miller (2005), saw the comprehension process as a dynamic one which uses both of these approaches depending on the speech situation, its context, prior knowledge, and many other factors. This view appears more reliable since it would seem highly unlikely that any human process would be completely hierarchical.

Due to complexity and linearity of spoken language, it contains strategies which enhance its cohesion (see Section 2.2.1). These strategies include, for example, repetition. Since ELF is used in high-stakes situations, it is essential that its speakers comprehend each other. Several studies (House, 1999; Firth, 1996; Meierkord, 1998; Mauranen, 2006) have shown that miscommunications are not particularly common in ELF situations or that they are not at least overtly expressed. One of the strategies used in ELF contexts is ‘let it pass’, originally coined by Firth (1996). This concept, now most often referred to as the ‘let it pass’ principle, is in use when the speakers do not overtly inform there is a misunderstanding or non-understanding, but allow the discussion or speech to proceed assuming the unclear issue will either be clarified or will become redundant as the discussion or speech proceeds. Therefore, the interlocutors rely on the above discussed situation model. As repetition is one of the strategies in spoken language, even if something is not comprehended in the first place this ‘let it pass’ strategy allows the speaker to continue and the others anticipate for things to be clarified as the speech develops further. Context is essential in these speech events and if we examine the situations in which ELF is used, most of the time the participants should be able to transfer their prior knowledge (see Section 2.1) to match the situation at hand.

Since interlocutors in ELF situations know that (usually) no one speaks ENL, they are also prepared to negotiate meanings and help others succeed in their communication. It is also usually known if the interlocutors have English as their L1 or not. Mauranen's (2006) study indicated that there are several ways to signal misunderstanding. These include specific questions, repetition of problematic items, and indirect signaling of misunderstanding. More importantly, however, it became evident in her study that interlocutors were especially sensitive to preventing misunderstandings through confirmation checks, interactive repairs, and self-repairs. Pitzl (2005) found many instances of negotiation of meaning, but also cases in which the speakers were aiming at preventing misunderstandings in her study of non-understandings in two different business meetings. Kaur's (2009) study of misunderstandings in ELF pointed out the importance of both language competence as well as the knowledge base in general when encountering misunderstandings.

Although Smit's (2010) ethnographically inspired, longitudinal study on ELF classroom discourse was conducted at an international hotel management program in Vienna, and not at a university, the results could be seen as transferrable to university environment as well. Her work highlighted the centrality of a joint effort to avoid misunderstandings and increase comprehension, which increased with time as students were socialized into the program (see Airey, 2009).

Moreover, many situations follow a certain, predetermined format, which allows for better comprehension. If we, again, think of the business negotiation, the participants usually know the topic of the negotiation and have background information on it. Many times the participants are familiar with each other, which further eases the situation. According to van Dijk and Kintsch (1983) and Kintsch (1988), all these aspects increase the participants' knowledge, which allows for better comprehension. Therefore, the findings on misunderstandings and non-understandings in ELF can be appreciated. Furthermore, since the sincere purpose of communication is usually understood by all parties involved, it is not unforeseen that evidence of permanent miscommunications or incomprehension has not, so far, been captured in any of the comprehension-related studies.

What may happen, if there is a communication problem among ELF speakers? Several studies (Mauranen, 2004, 2006; Pitzl, 2005; Hynninen, 2010, 2011) have been conducted on various corpuses regarding this. Pitzl examined non-understandings within a business context while Mauranen investigated various features, including non- and misunderstandings, of ELF in academia. Hynninen focuses on mediation and interaction also in academia. Mauranen's (2012) latest publication focuses even further on the academic use of ELF and how it compares to that of NSs. These studies have shown that in those cases where comprehension is crucial and there may be the need for clarifications, discussion on meanings and details, as well as a joint effort for resolving the matters manifest themselves.

2.3.2 ELF in University Education

The use of ELF in universities and the reasons for it is discussed above in Chapter 1. It is worth mentioning, however, that the goals for internationalization do not, at least at the moment, include higher tuition from international students since the tuitions in Finnish universities are currently non-existent. The benefits of internationalization are seen more in terms of preparation for the globalized work environment as well as for the international connections scientific communities flourish.

Nevertheless, the increased use of English in academia has also been problematized (Hellekjaer, 2010; Airey, 2009). Students have been concerned about their own, as well as their lecturers' and supervisors', English skills while the university staff is apprehensive regarding their own English skills. This critical view on students' and staff's English skills may relate to the ENL model, which is still in use in basic education. This native language model unnecessarily creates an impression of inadequate language skills even when communicative goals are reached as well as highly technical and scientific subject matter is discussed. For most students, attaining the ENL level, even when studying English for ten to twelve years, remains a goal far out of reach. When we refer to the above mentioned studies regarding ELF and the success of communication, these concerns seem fairly irrelevant.

2.3.3 Comprehension in Academic ELF

Academia is a world of its own with identifiable genres. In reference to studies on academic discourses, it is necessary to note that there are "no native speakers of academic discourses" (Mauranen et al., 2010: 8). Once the students have been socialized into academia, prior knowledge and genre (see Section 2.1) provide the scaffolding which helps the students with comprehension. Naturally, the topics and general issues discussed in lectures, group work, seminars, and other academic events are also partially known to most, if not all, participants, which further fosters understanding.

ELF in academia has been investigated through several approaches. The more holistic, comprehension-related studies (Klaassen, 2001; Airey, 2009; Hellekjaer, 2010) offer contradicting results. While Klaassen concluded that after a year of having studied in a program where the instruction was conducted in ELF, the students had adapted to EMI, both Airey and Hellekjaer pointed out several disadvantages of EMI and how students should be provided English instruction regarding lecture structure and other aspects of lectures for better lecture comprehension while lecturers need guidance on delivering well-structured lectures. Hellekjaer's study showed that students often employ various strategies to succeed in EMI. These strategies include asking questions after the lecture (as students feel apprehensive speaking English during the lecture), reading on the lecture topic, perhaps the lecture notes, prior to the lecture, as well as after the lecture. All these appear to be the type of strategies we would encourage all students to engage in, regardless of the lecturing language, to allow for a deeper understanding of the lectured topic.

To further review the studies conducted on EMI and ELF, Björkman (2010) found that lecturers in a large technical university in Sweden did not use pragmatic strategies, such as repetition, questions, and commenting, to the extent students in the same university did. Naturally, the students' language use situations were different from lectures, which influences these results. Several studies have also shown that since the use of pragmatic strategies is seen as useful for enhancing understanding and preventing misunderstanding, the presence of these strategies in discourse is beneficial to its success (Mauranen, 2006; Kaur, 2009; Cogo, 2009).

Björkman (2010) further pointed out that, for example, the frequency of questions in her technical university data is low, which is similar to findings by Thompson (1998), who compared the presence of questions in NS academic monologues in two different disciplines, linguistics and applied science, and found that the latter contained far fewer questions. Although Thompson's study concerned NS lecturers, the similarity in the use of pragmatic strategies in similar disciplines is interesting. Based on Thompson's study and her own findings, Björkman drew a conclusion that the use of pragmatic strategies, such as questions, is uncommon in engineering lectures held in ELF (in her data).

Comprehension of lectures has been investigated to a large extent in situations where lecturers are NSs. Most of these studies (Thompson, 1998; Mulligan and Kirkpatrick, 2000; Morell, 2004; Bamford, 2005; Flowerdew and Miller, 1997) examine how the NNS students manage in the lectures held by NSs. The ways in which lecture comprehension is measured include note taking and evaluation of the notes, on-line summaries, multiple-choice and cloze tests, written recollection of the lecture, and identifying the main points of the lecture.

To investigate an example of these NS lecturer studies in more detail, I reviewed Mulligan and Kirkpatrick's (2000) study. They examined lecture comprehension of both NS and NNS students in an Australian university Mulligan and Kirkpatrick also included in-class observations, student questionnaires, and interviews, while the above mentioned studies did not include student perception of the lectures. The class-observation focused on students' note-taking while questionnaires and interviews provided students' perception of the situation. The NNS students felt that the lecturers' speech rate was high and that cultural issues, such as idioms and references to culturally biased examples, interfered with comprehension of the lectures. When contrasting this situation with a NNS lecturer, these types of problems may have been non-existent. Naturally, when students first enter the university they have to be socialized into academia, but that remains the case regardless of the language and cultural background.

The above mentioned studies tend to rely on right and wrong responses (e.g. multiple choice, cloze tests) as well as on memory (on-line summaries, note taking). These types of

measurements focus their evaluation on surface rather than deeper comprehension (Biggs, 1999) and may provide results which do not reflect the actual comprehension scenario. It is problematic to find a way in which to measure comprehension. An approach which draws on students' own perception of comprehension may provide a more reliable view on students' comprehension of lectures since even quizzes or exams on the content of the lecture may not render a completely truthful picture of student comprehension.

This section reviewed what ELF is and how it is used both in general and in academia. Especially due to the ever increasing internationalization, investigating ELF in general and in academia is pertinent. This is reflected in the foci of the most recent studies which, for the academia, tend to be conducted in the Nordic countries while the more generally oriented studies are also conducted elsewhere.

To summarize how genre, interaction, and ELF are approached in the present study, Figure 2.5 below attempts to conceptualize this.

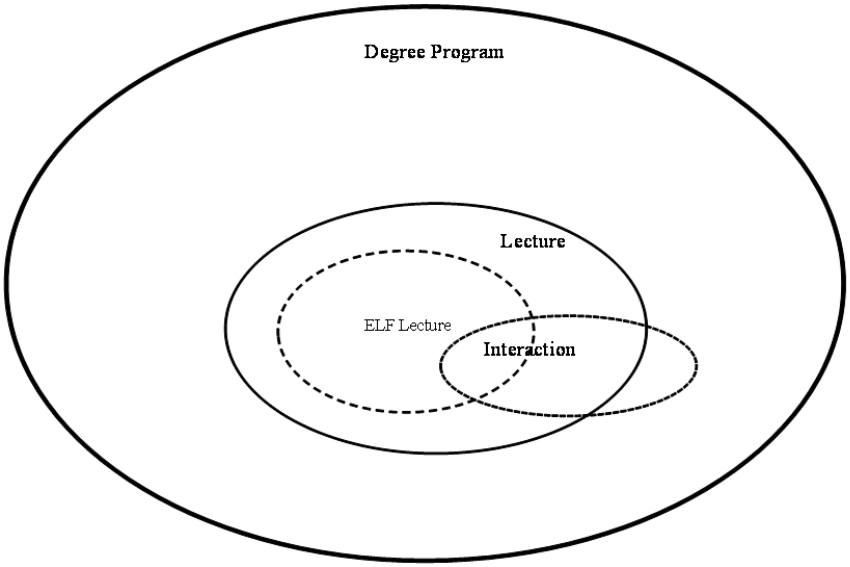

Figure 2.5 Genre, Interaction and ELF as Approached in the Present Study

There are several genres within academia and, for the sake of clarity, this illustration shows only the ones discussed here. The lecture genre is the stage or the platform which is the focus of interest in the present study; more specifically, lectures held in ELF and linguistic features in them. Genre is viewed as a combination of Swales's (1990) and Mauranen's (1993) views: it is formed by both the members of the discourse community as well as defined by the genre itself.

Interaction[12] is approached from a Bakhtinian (1986) aspect, i.e. all language use is seen to be dialogic. Finally, ELF is viewed in its strict sense: as a lingua franca among those who do not share a common language. A presence of a few native speakers, however, is not seen to change the ELF communication into EIL or some other communication.

All of these have been the focus of interest in various studies. Genre has the longest history as a topic of investigations while ELF is the most recent of them. For the purpose of the present study, these three concepts set a scene: genre is where something occurs while interaction is what is being investigated and ELF is the medium through which the interaction occurs.

[12] Interaction is discussed here as part of the conceptual framework, although the focus on it was a result of the phasal study of the present Master's Program.

3 Approach, Data, Implementation, and Analytical Methods

Since the task of the present study was to evaluate lecturers' English while obtaining students' perception of those lectures, a thorough examination of various methods and approaches was required. This chapter discusses how the approach was selected, how the approach influences the choices made, and how the research design was formulated together with data collection. When this methodological background for the study is thus set, the implementation of the study is reviewed by first looking at the phases in which this study was carried out. Then the path to those linguistic features which were linked to students' different perceptions of lectures is highlighted. Finally we reach the analytical model through which the interactional features in the lectures are categorized.

The present study is a qualitative study focusing on an EMI Master's Program. The lectures within this Master's Program are the stage or a platform in which the examined discourse features occur (see Figure 2.5 in Section 2.3.2). Although the original task, which began this investigation, was to review the lecturers' English, a more thorough view on the Master's Program lectures and how students perceive them became the focus of this study. In order to obtain a thick, i.e. a comprehensive, picture of the Master's Program lectures, a bottom-up method was chosen as the study approach. This type of study can also be described as inductive rather than deductive. Figure 3.1 below defines the differences between these two approaches.

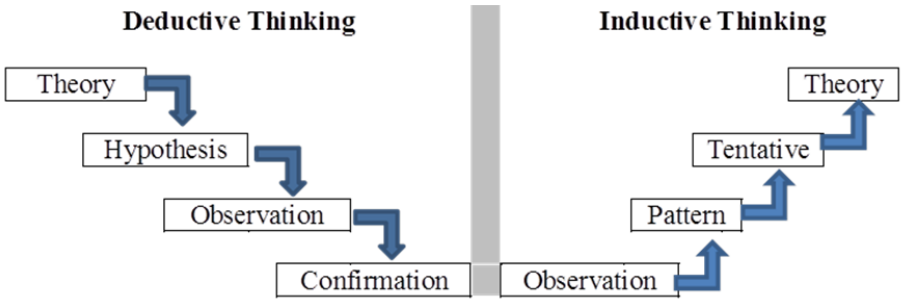

Figure 3.1 Deductive and Inductive Thinking Based on Trochim (2001)

As this figure illustrates, in the inductive, i.e. bottom-up, approach the data and observations have to come first and the research needs to be data driven. Trochim (2001)

claimed that observation-based research is qualitative and seeks to arrive at a theory which then explains the observed behavior. Despite Trochim's strict views, also quantitative studies, for example in corpus linguistics, can be data driven. Examples of qualitative, observation-based approaches include, for example, ethnography, grounded theory, phenomenology, and the case study. When considering the suitable approach for the present study, it was conducted through a very pragmatic selection. The aim of the study was to gain in-depth information on a specific Master's Program, its lectures and student perception of them. According to Flyvbjerg (2011), a case study views the collected, concrete data through a theoretical framework. Since this seemed to match with my preliminary plans on the research process, the case study approach was examined further.

3.1 Case Study

The main idea in a case study is that it is conducted in a real life context and it aims to capture all of the details of a particular group which are relevant to the purposes of the study (Yin, 2003). Yin further recommended the case study approach for descriptive, exploratory purposes and to those studies which seek answers to "How" and "Why" questions.

There are multiple aspects in a case study that need to be considered for it to be reliable. In all cases there has to be a subject which, in the present study, is comprised from the lectures in the Master's Program. In addition to the subject, there has to be the object, i.e. the theoretical focus of the study. In the present study the object is, firstly, students' perception of lectures within the Master's Program, and, based on students' perceptions, the interactional features in the lectures.

In order not to over-extend the case to be too broad, it is essential to bind the case (Baxter and Jack, 2008). With binding these authors mean limiting the scope of the study in some aspect, such as in regards to time or place. The present study includes the Master's Program lectures within the academic year 2005-2006. Therefore, the case study is bound in three aspects: time, place, and activity (Creswell, 1998; Stake, 1995). Furthermore, the present study, though the case includes lectures within a full academic year, cannot be seen as a

longitudinal study since the lectures were all different and by different lecturers. Since the data was processed simultaneously during the data collection, the present study is not a retrospective study either, but a snapshot of a Master's Program (Flyvbjerg, 2011).

Another issue which needs to be determined is the type of a case study used. According to Stake (1995), there are two types of case studies: intrinsic and instrumental. Intrinsic is the type of case which interests the researcher as a whole while in an instrumental case study certain phenomena are the focus of the study. Yin (2003) viewed the different types of case studies as explanatory, which links the case with its effects, and exploratory, which may not have very predictable results, but describes a phenomenon within real-life context. The present study type is an exploratory, descriptive case study.

In order to define the case study even further, i.e. how the case or cases are viewed needs to be considered. The most typical case study examines a single case, for example a language learner (Duff, 2008), and explores that case holistically to obtain as comprehensive a picture of the case as possible. In a multiple case (Yin, 2003) or collective case (Stake, 1995) study, several single case studies are combined and compared. Neither of these views was completely applicable to the present study.

Yin (2003) further described a single case study with embedded units and that was chosen as the definition of the present study in respect to the multiple vs. single issue. In this case, the single case is the Master's Program with lectures as its embedded units. The benefit for choosing this approach is that these embedded units can be studied individually and compared while still obtaining a holistic, cross-case view on the case itself.

According to Flyvbjerg (2011), the case or the cases in a case study strategy are not selected randomly. The selection is based on an informed selection. The selection can be the key cases, outlier cases, or local knowledge cases. The key cases are those cases which are seen as interesting in reference to the research questions. The outlier cases are those which either represent the extremes or otherwise do not match the "norm" within the cases. The local knowledge cases are known to the researcher: their setting and circumstances are

so familiar to the researcher that the study can be conducted based on this information in a manner which would not be possible without such knowledge (Flyvbjerg, 2011).

The case selection in the present study was based on practical issues: the lecturers' English within this Master's Program was to be evaluated; therefore the Master's Program was selected as the case. The embedded units, i.e. the lectures (for further details on lectures, see Section 3.2 on data), were those which I was able to attend, record, and collect students' feedback. I would, consequently, define the selected case as a key case as it represents a case within which it is possible to obtain answers to the research questions.

For research to be reliable, it needs to have both internal and external validity. Internal validity is increased through the selection of the examples within the case: if they are randomly selected, the validity is high; if there is evidence of bias in the selection, the validity is low. The internal validity influences the external validity by resulting in a more generalizable outcome in those cases with solid internal validity. However, Yin (2003) also pointed out that sometimes, when the goal is to increase the case validity through focusing, it may also limit the generalizability of that particular case study results, as they are, perhaps, too restricted in their perspective.

Based on Bassey's (1999) description of a case study in an educational setting, the present study aims to investigate specific characteristics of a program within its natural context. These definitions of a case study are met through focusing on actual lectures, recording them, and collecting feedback from students who attended the recorded lectures. The multiple sources of data allow avoiding superficiality of the results (Yin, 2003).

There are several studies where the informants have been asked to give feedback, write summaries, or complete tests on prerecorded lectures which were played to the informants (Rost, 1994; Chaudron et al., 1994). The setting in these types of studies is more artificial. The goal of the present study was to keep the data and the situation in which it was collected as authentic as possible to heighten the construct validity of this case study. (Duff, 2008). The authenticity of the lecture situation was maintained through no other interference but the video recording.

In order to provide a conceptual framework (Miles and Humberman, 1994), Yin (2003) suggested using propositions while Stake (1995) discussed issues. These are items which the researcher has a notion of prior to the actual study. The propositions in the present study are listed in Table 3.1. In order to incorporate the linguistic features in the propositions, they had to be included after the preliminary investigation of the data. However, they do precede the actual study of the features themselves.

Table 3.1 Propositions and their Sources for the Present Study

Proposition	**Source**
• Lecturers' English interferes with lecturing/comprehension	• Students' view on lecturers' English (Pynnönen, 2005)
• English is used daily or weekly with mostly NNSs of English in anticipated future working life of the students	• Working life view on English (Suviniitty, 2007)
• Comprehension is influenced by identifiable linguistic features	• (Björkman, 2010; Airey, 2009; Crawford Camiciottoli, 2004; Klaassen, 2001; Mauranen, 2006)

These propositions were considered when designing the present study. Selecting an explorative case study as the approach meant that at first the Master's Program was reviewed as a holistic entity and as many of its aspects as possible were examined simultaneously. These included the work place expectations as well as students' perception of the lectures. This type of approach was necessary as not to restrict the observations until the focus of the more in-depth study and the knowledge of what was pertinent in this study was found.

Data collection in case studies is discussed by all authors of case studies. The main aspect of data collection in case studies is the use of multiple sources. The collected data needed to be organized and stored in an orderly fashion and the chain of evidence needed to be reported (Baxter and Jack, 2008; Duff, 2008; Flyvbjerg, 2011; Stake, 1995; Yin, 2003).

The first of these principles refers to triangulation of evidence. To adhere to the suggested principles of the case study data collection, this study is based on several triangulations: the

view on English in the lectures by the students and the researcher as well as the view on it in the working world (Figure 3.2 below).

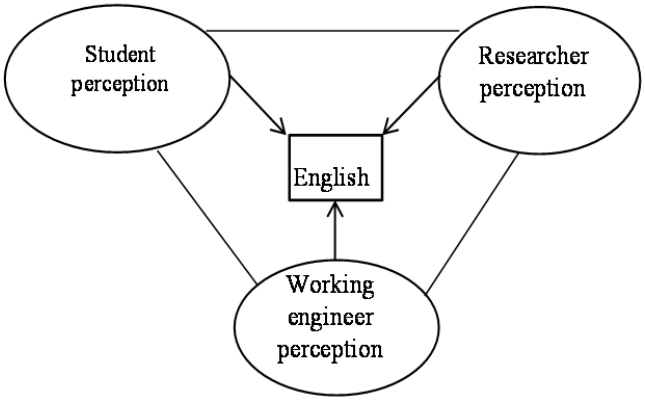

Figure 3.2 Triangulation on English

The triangulation on English is realized through two different surveys as well as my own view on how English is used today.

Focusing on the case itself, I was able to obtain the students' view, my own view as a participant observer as well as the view acquired through discourse analysis of the transcribed data, as illustrated in Figure 3.3.

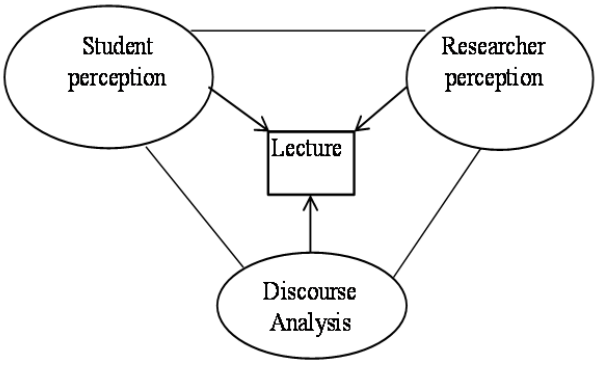

Figure 3.3 Triangulation on Lectures

The latter triangulation, thus, includes the student perception through questionnaires, researcher perception in field notes, as well as the transcriptions of the video-recorded lectures, the analysis of which is based on discourse analysis. Triangulation and multiple sources of information increase the trustworthiness of the investigation.

When considering generalization, some researchers (e.g. Bassey, 1999) have seen case studies as able to provide only fuzzy or best estimate of trustworthiness (BET). In this type of estimate, the researcher draws a tentative conclusion based on his/her professional expertise when definitive research data is missing. Flyvbjerg (2011) argued against the common notion regarding the results of case studies as ungeneralizable. He further commented that in any method all aspects of the study influence its reliability and, therefore, also its results and their generalizability. The present study aims at descriptive, exploratory results which, since the study considers multiple triangulations as well as multiple perspectives, are seen as generalizable to similar situations.

3.2 Research Data

The main data of this study comprises 21 video-recorded lectures with student feedback collected with a paper-based questionnaire immediately after the recorded lecture. The

lectures are discussed in more detail in Section 3.2.1 and student questionnaires in Section 3.2.2.

In addition to the main data, this study also includes supplementary data: a NS lecture and student feedback on that, as well as two lectures in Finnish by the same lecturers that were included in the main data lecturing in ELF. These lectures were incorporated in the study, firstly, to see students' perception of the NS lecture, and secondly, to verify the existing preconception (Pynnönen, 2005) that lectures in native language are more interactional with more student engagement. The third reason for incorporating these lectures as part of the bigger picture regarding this Master's Program was the simple fact that they in actuality were an integral part in the studies in this program and, therefore also part of the case study. Hence, their presence in this study was deemed necessary to obtain a holistic description regarding this case.

Furthermore, to allow for the thick description of the present case, a working life use of English was surveyed as well. This survey was conducted on-line in Finnish (see Appendix 1 for the translation of this survey) among the members of Finnish Paper Engineers' Association for the purpose of collecting information on what the students of the investigated Master's Program may expect in their working lives regarding their use of English. Paper Engineers' Association members were selected as the target group since they are an integral part of the FBI (Forest Based Industries). The association is also highly regarded among both students and business associates. The questionnaire also reviews the possible problem situations that arise in the respondents' use of English. The reason for conducting the survey in Finnish relates to the information obtained from the association: most of the members of this organization are Finnish. Although many of them work internationally and use English, a questionnaire in Finnish was also thought to encourage the members to respond to it. Information regarding the questionnaire and its purposes together with the link to the web-questionnaire was e-mailed to 1200 members of the Finnish Paper Engineers' Association.

In order to review this Program further along the general lines, a small comparison regarding student performance was conducted. This comparison focused on student grades

in ten courses when the Master's Program was still in Finnish and compared these with the student grades from similar courses in the EMI Master's Program. The Finnish Program grades were collected from the academic year 2001-2002 while the EMI Program grades were from the academic year 2006-2007.

After the ELF lectures were reviewed and analyzed in more detail, an interest on determining how the same lecturers would perform in their native language, Finnish, arose, mainly based on student feedback (e.g. "/ but in Finnish he's one of the best lecturers /") as well as lecturers' own comments (e.g. "/ more difficult to find words for examples /"). Furthermore, student attitudes on EMI (Section 1.3) encouraged an investigation of Finnish lectures. Since the lectures of the studied Master's Program were only held in English, it was quite a challenge to find lectures held in Finnish. Despite this difficulty, two lecturers were captured on video lecturing in Finnish. The analysis of these lectures provided further information on how language may influence lecturing and lecturing style (for details on lecturing styles, see Section 2.1.2).

3.2.1 Lectures

The selection of the recorded lectures was through necessity: the department head had asked for a review of all lecturers' English and it was deemed most practical to record their English in a lecturing situation, which even the lecturers were most concerned with. Naturally, there would have been an opportunity to record other types of communication as well but to maintain the research focus on the issues that were deemed most pertinent according to both the students and the staff, it was important to collect as much information on lectures as possible and to keep them as the core of the present study.

Lectures in this study mean those teaching events where a lecturer is the main speaker or organizer. The number of students in the audience is not viewed as a determining factor. Since attendance in the lectures is not compulsory, the number of students attending them varies notably: from as few students as four to twenty-four. Despite the low attendance in some of the lectures, they still maintained the features which identified them as lectures: the lecturer holding the floor for the majority of the time, discussion or dialogue occurs by the

lecturer invitation only, the lecturer at the front of the room, and students sitting facing the lecturer.

Since the target of investigation was ELF lectures, only those lectures which contained at least one international student in the audience were considered as ELF lectures. In other words, if the entire audience was Finnish students with a Finnish lecturer, even if the lecturer lectured in English, it was not included in the present study. These cases were seen as second language use (SLU) situations rather than ELF situations and, therefore, were excluded from the study.

The lecturers were asked for the permission to record their lectures and a date and time was agreed on prior to the recording. In cases where no international students were present at that lecture, the recording was cancelled as the speech event was not deemed comparable to the others.

All in all twenty-one ELF lectures were video-recorded with a Canon DV MVX35i camera. The goal was to record all lecturers who, at that point, lectured in the Master's Program. This goal was reached and the recordings took place during two semesters: fall semester in 2005 and spring semester in 2006. In order to minimize the researcher interference during the lecture, the length of recording was kept to one hour, which is the length of the video-recorder tape when recording at short play (SP) setting. This SP-setting was selected to maximize the voice quality in the recording. The one hour recordings avoided the change of videotape in the middle of the lecture, which was seen more of an interference factor than the benefits of the extra material on the second video tape would have provided.

All but one lecturer in the ELF lectures were native speakers of Finnish. The one exception was a native speaker of German. Six of the lecturers were female and fifteen were male. Typical of this field, all lecturers had at least some, most of them extensive, experience within the industry. Two of the lecturers were visiting lecturers, employed by the industry rather than the university.

3.2.2 Student Questionnaire

The students attending these recorded lectures were asked to complete a paper-based, anonymous questionnaire (see Appendix 2), which contained questions regarding their own English skills, as well as on lecture comprehension and their perception on the lecturer's English skills.

For demographical information, the students were, as Appendix 2 depicts, asked for their native language as well as where they acquired their English skills. The students' year of birth and their gender was also collected. Furthermore, the questionnaire included four-level Likert scale questions, open-ended questions, and space for general comments. The four-level scale was selected in order to avoid non-committal responses in the middle of the scale, which may be an attractive choice for quite a few respondents when it is available (Dörnyei, 2003). The questionnaires were in English, but Finnish students were able to use their native language to respond to open-ended questions and to write comments in the space provided in the questionnaire. Most students, even the Finnish ones, used English in their responses.

A total of 218 questionnaires were collected after the 21 video-recorded lectures. Since the study focuses on a Master's Program and its lectures, the same students were present in many of the recorded lectures. In other words, there were not 218 different respondents, but the responses were collected at 21 different times. Since the respondents were not identified by their names, it is not possible to say, how many times each individual responded to the questionnaire in those 21 lectures. Anonymity was, however, seen crucial in gathering the responses and, therefore, no attempt in using identification of any kind for the questionnaires was considered.

Out of the 218 responses, 132 were given by males while 86 were given by females. The majority of responses were by Finnish native speakers (113) while 92 were speakers of

"other"[13] native languages (fourteen in all), and 13 were native speakers of Swedish. Swedish could mean either Finland-Swedish or Sweden-Swedish[14]. Respondents' nationality was not deemed necessary information, since the native language provides the linguistic background which would be of interest in the present study.

The main purpose for the questionnaire was to provide information on students' perception of lecture comprehension. The statements which focus on this are numbers 7, 8, 9, 16, and 17 (see Table 3.2). When calculating the comprehension value for each lecture, the values in responses for the statement number seven had to be transposed, as all the other statements included in this calculation were negative. In order to give a positive statement with the "agree" response the largest value, the values needed to be reversed, as shown in Table 3.2 below, where the values used for calculation are in parentheses:

Table 3.2 Calculation of the Values in the Questionnaire Responses

		Agree	Somewhat agree	Somewhat disagree	Disagree
7.	I understood the contents of the lecture well.	1(4)	2(3)	3(2)	4(1)
8.	I did not understand the main contents of the lecture.	(1)	(2)	(3)	(4)
9.	Most of the lecture remained unclear to me.	(1)	(2)	(3)	(4)
16.	The contents of the lecture remained secondary since I concentrated on the language so much.	(1)	(2)	(3)	(4)
17.	It was difficult to follow the lecture, but it had little or nothing to do with the language used.	(1)	(2)	(3)	(4)

Based on the values for statement responses, the most positive comprehension value obtainable from one student's responses, therefore, would be 20 and the lowest value would be 5. Since there were a different number of students at each lecture, the calculated totals were divided by the number of students, i.e., the averages were used, in order to reach a comparable value for each lecture.

[13] The "other" native languages included the following: Marathi/Hindi, Spanish, Bengali, Uruguayan, English, Japanese, Norwegian, Czech, French, Dutch, Portuguese, Estonian, German, Chinese, Hungarian, Thai, and Lithuanian.

[14] Swedish spoken in Finland differs from that spoken in Sweden. The questionnaire did not ask to identify which Swedish the students spoke.

The values for lecturers' English skills were calculated in the similar manner, though only using the student evaluation of excellent, good, fair, and poor. These were given numerical values, 4, 3, 2, 1 respectively and, to reach a comparable value for each lecture, averages were used for comparison.

3.2.3 Student Feedback as Selection Criterion

Students' responses are seen as a filter which categorizes the lectures based on students' perception on their comprehensibility. Figures 3.4 and 3.5 below illustrate this process.

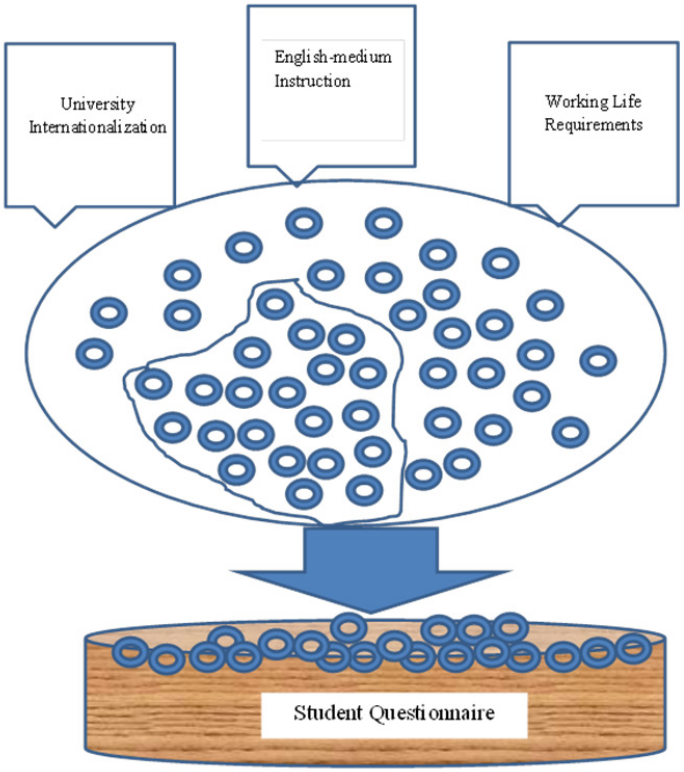

Figure 3.4 Student Questionnaire as Selection Criterion

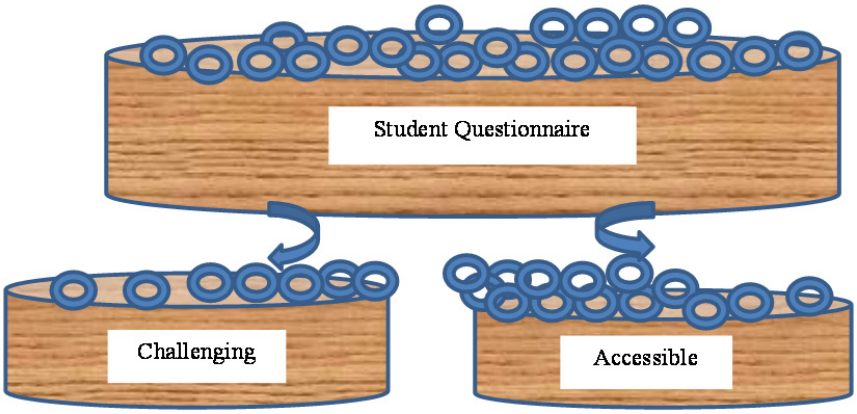

Figure 3.5 Categorization of Lectures

This categorization depends on students' responses to the questionnaire statements as described in Section 3.2.3. Through this categorization, based on the comprehension values, it was possible to form a continuum on which to place all the lectures. The differences between the comprehension values were not particularly large. However, at the ends of the continuum the differences were notable. This continuum is depicted in Table 3.3 below.

Table 3.3 Lecture Continuum Based on Comprehension Values

Lecture Number	Comprehension value	Comprehension value average	Attendance	
06	15.50	3.10	6	CHALLENGING
20	16.00	3.20	24	
CL02	16.11	3.22	9	
08	16.67	3.33	6	
CL05	16.70	3.34	10	
CL19	16.73	3.35	11	
10	16.78	3.36	9	
12	16.88	3.38	8	ACCESSIBLE
AL17	16.89	3.38	18	
07	17.00	3.40	6	
AL15	17.08	3.42	12	
16	17.38	3.48	16	
09	17.43	3.49	7	
22	17.47	3.49	15	
01	17.50	3.50	6	
13	17.50	3.50	10	
18	17.91	3.58	11	
AL21	18.05	3.61	19	
11	18.75	3.75	8	
03	18.78	3.76	9	
04	18.78	3.76	9	
14	19.25	3.85	4	

Table 3.3 shows how lectures are categorized into challenging and accessible. The pivoting point was located through the use of mode in averages of the lecture comprehension values. In this continuum there are, actually, four modes, 3.38, 3.49, 3.50, and 3.76. Since the range of the averages is fairly small and the mathematical center point of the possible range was 2.5 (range 1 – 4), the first mode was selected as the cut-off point for challenging/accessible lectures. Furthermore, the assumption was that the ends of the scale would provide the most differing information, which further encouraged selecting this pivoting point.

3.2.4 Transcription

The continuum presented in Table 3.3 was further used to select three challenging and three accessible lectures for a more thorough investigation in order to gain a deeper understanding of the present case (see Figure 3.6). There were several issues which needed to be considered regarding this selection. The first one was the quality of the recording. As the recordings were not performed in the same space, the quality of the recordings varied notably, depending on the classroom or lecture hall.

Another issue was the audience. In some lectures there were very few students present while others had more students in them. In order to have as much feedback as possible from students, only those lectures with nine or more students present were considered for transcription. Since the ends of the continuum showed the most difference in their comprehension values, those lectures as close to the ends of the continuum were the main targets for transcription. The transcription conventions were adapted from the ELFA Corpus[15] (see Appendix 2).

Some of the lectures were no actual lectures at all. In some the lecturer acted as a chairperson while the students gave presentations on various topics related to the course (e.g. lecture 20). In other cases, the lectures were actually workshops where students were asked to work in small groups to solve problems or find information on certain issues. These types of lectures were excluded from transcription in order to keep the transcriptions comparable and the investigated embedded units of the case study as similar as possible (see Section 3.1).

The most important factor influencing the original selection was, however, based on the case study approach. It was already discussed in Section 3.1 how the case study selection is not performed randomly. The selection can involve key cases, outlier cases, or local

[15] http://www.helsinki.fi/englanti/elfa/elfacorpus.html#link

knowledge cases (see Flyvbjerg, 2011). In the present study, the embedded units (i.e. the lectures) within the case study were treated as separate cases in the selection process. To select those units which would provide most information when compared to each other meant finding the outlier cases. After finding the outlier cases, they were included as two of the embedded units. Therefore, starting from the very ends of the continuum (Table 3.3), the qualifications of the lectures (the number of students, voice quality, and lecture type) were evaluated and what are called the outlier units (lectures CL02 and AL21) which could be transcribed were located. In addition to these outliers, four other lectures (CL05, CL19, AL17, and AL15) were also transcribed and selected for further investigation to obtain a more rounded description of the case (i.e. the Master's Program) as a whole as well as to see whether the use of interactional features in these lectures varied.

3.3 Implementation

The implementation of this case study was completed in phases. The main data collection, as mentioned above, occurred during the academic year 2005-2006 while the student questionnaires were processed during the summer of 2006. Transcriptions were completed during the academic year 2006-2007. Supplemental work, such as the Paper Engineer Questionnaire, was conducted during the early part of 2006 while the comparison of students' grades in EMI vs. Finnish Program was completed during the summer of 2007.

3.3.1 Phases

In order to follow the case study strategy of obtaining information through multiple sources, acquisition of a larger picture on this Program was necessary. In an exploratory study, phases help in bringing forward a deeper understanding of, in this situation, the case we are investigating. The image below (Figure 3.6) illustrates how the multiple points of view on the case gradually form a holistic, deeper understanding of the case.

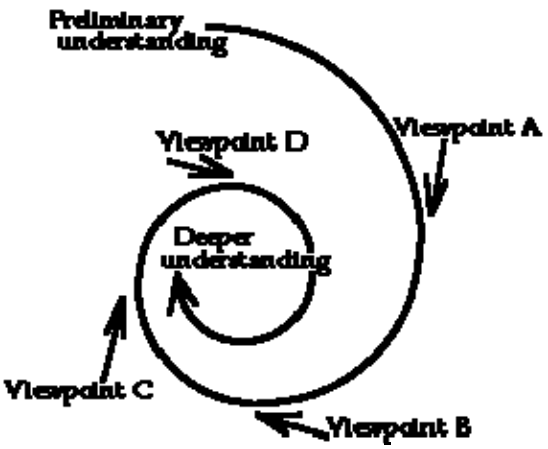

Figure 3.6 Phases of an Exploratory Study (Routio, 2007)

Preliminary understanding is seen to cover what was known of the Master's Program prior to the actual case study investigation. We knew internationalization was one of the driving forces in implementing this Master's Program and it still is one of the chief goals set by the university (see Chapter 1). This Program materialized the university's goals and expectations.

Viewpoint A is based on a survey conducted by the student organization (Pynnönen, 2005) through which information on students' view on the international Master's Program was obtained. As Table 3.1 on propositions of the present study indicates, students' expectations regarding the Program were not overwhelmingly positive (see Section 1.3).

Viewpoint B includes the survey conducted specifically to gain knowledge on the working life aspect. A survey among the members of the Finnish Paper Engineers' Association was conducted and it will be discussed in detail in Section 4.1. As illustrated in Figure 3.2, information collected through this questionnaire was used for triangulation to obtain a more comprehensive picture of students' situation.

Viewpoint C refers to my own view on the international Master's Program based on the literature reviewed on lectures and lecture comprehension (see also Sections 2.1.2 and 2.3.1). An attempt to investigate student comprehension through their performance in the earlier (2001-2002) Master's Program in Finnish compared with their performance in the

latter (2006-2007) EMI Master's Program was made. This comparison and its results are discussed in more detail in Section 8.1. It was clear that lectures needed to be studied in detail in order to locate differences and similarities in their features and to be able to complete the task of evaluating lecturers' English. At this point, obtaining students' feedback on the lectures was determined necessary.

Viewpoint D, therefore, is the lectures within the present case study. The data collected in these lectures, both from the students through questionnaire and through video-taped lectures and their transcriptions increased the understanding of this Master's Program in a comprehensible way. At this phase, it was evident that something in the examined lectures was influencing student perception of them as their comprehension values were different. After thoroughly investigating the outlier unit lecture (CL02 and AL21) transcripts, the lack of (CL02) and presence (AL21) of, firstly questions and, consequently, also other interactional features became apparent. Thus, based on this finding, the focus of the more detailed examination was directed to interactional features.

The final phase, deeper understanding, was gained through the synthesis formed through analyzing the gathered data, as well as through structuring and writing this report on the present study. When the preliminary understanding and the deeper understanding were compared, it became evident that all the phases in this study were essential for a holistic understanding of this complex case.

3.3.2 Discourse Analysis

In order to gain the above mentioned deeper understanding of this case, the selected lectures (CL02, CL05, CL19, AL17, AL15, and AL21) were transcribed for further analysis. A discourse analytical approach was used in focusing on the functional, pragmatic aspects of the lectures. The use of discourse analysis allows the research to begin with a research question. The point of departure also entails top-down processing of the text itself where the text is studied first as a whole and, as the details emerge, they are investigated in more detail. This should not be, however, confused with the fact that the present study as a whole

is processed bottom-up as the starting point is the research question and not a theory or a hypothesis.

Discourse analysis, according to Schiffrin (1994), covers the following approaches: Speech Act Theory, Interactional Sociolinguistics, The Ethnography of Communication, Pragmatics, Conversation Analysis, and Variation Analysis. All these approaches view language as social interaction. This type of view in linguistics aligns with the functionalist paradigm rather than the formalist paradigm (Schiffrin, 1994: 415-416). The functionalist paradigm regards language mainly as a social phenomenon while the formalist paradigm views it mainly as a mental one.

Discourse analysis attempts to consider context-related, as well as other, aspects related to naturally occurring speech while providing information on the use of language. Since naturally occurring language is always used in context, this should be considered when language is analyzed. When we use language, we construct meanings based on everything we have available to us at the time: language structure and its function, text itself, and the context where it is used, discourse and its communicative purpose.

In a speech event all information available is processed in such a rapid manner that for analysis, it is necessary to freeze the situation by recording and transcribing the discourse. Obtaining information on the non-linguistic issues, such as the people and social aspects of the event, is also necessary. In the present study, lecture transcriptions were analyzed to locate discourse features which may influence students' perception of the lectures. Lecture genre was seen as the stage or a platform with ELF as its communicative tool. Through the use of ELF, the students and the lecturer construct meanings on topics discussed in lectures.

Schiffrin (1994: 419) summarizes the quest for information through discourse analysis as follows:

> To understand the language of discourse, then, we need to understand the world in which it resides; and to understand the world in which language resides, we need to go outside of linguistics. When we then return to a linguistic analysis of discourse – to an analysis of utterances as social interaction – I believe that we will find that the benefits of our journey have far outweighed its costs.

This concisely states the grounds for such multifaceted study with many elements: it is necessary to gain information on various aspects of the language use situation in order to understand it. Discourse analysis provides the glasses through which the data in this study is investigated in detail.

3.4 Model of Analysis

Analyzing language used in lectures is the last phase of the present study before having obtained a deeper understanding of the entire case. The phases leading to the linguistic analysis were used as orienteering symbols in order to locate the essential information which influences the way students perceive lectures. When the transcribed lectures were examined, the first linguistic feature that seemed to correlate with students' perception of lectures was questions. A more thorough investigation of other interactional features, in addition to questions, reinforced this view. Therefore, interactional features emerged as the focus of the present study.

3.4.1 Interactional Features and their Classification

Interaction in discourse is a wide research area. Limiting and choosing the focus of investigation was, therefore, necessary. Three interactional features (control acts, questions, and repetition) were seen appropriate for the present study, since, when initially searching for the differences in student perception of the lectures, the first one to emerge was questions. With further, more detailed examination of the transcripts, the differences between the presence of both directives and repetition was also apparent in the outlier embedded units of the case study, i.e. lectures CL02 and AL21. The following summarizes the introduction to interaction in Chapter 2. The interactional features that are the focus of this study namely control acts, questions, and repetition, will be discussed in more detail in Chapters 5, 6, and 7 respectively.

Control Acts

Control acts are, in a fairly narrow view, "attempts to produce change in the actions of others" (Ervin-Tripp et al., 1990: 308). Ervin-Tripp et al. further state that any moves which

could be viewed as such by the interlocutors can be seen as control acts. To have a focused approach on control acts, in this study they are categorized into directives (e.g. *mark this slide*), requests (e.g. *I would like you to try*), advice (e.g. *you should understand*), inclusives (e.g. *we have to know*), impersonals (e.g. *it is very important to understand*), and prohibitives (e.g. *you don't need to think*). Since the control acts are often very direct and addressed to the audience, they increase audience involvement. Control acts can be seen almost as traffic signals for the audience, since they guide the audience through the speech indicating what is worth their attention.

Questions

Questions carry many functions in discourse, especially in more dialogical discourse. Here questions are categorized into content-oriented and audience-oriented which both include subcategories (Thompson, 1998). Audience-oriented questions are those which clearly should be followed by a response or an action. The sub-categories for audience-oriented questions are information seeking/checking (e.g. *who was here last time*), didactic elicitation (e.g. *so what does it mean now, too low water retention. what does it mean*), and invitation (e.g. *any questions*). The sub-categories for content-oriented questions are organizing – the topic or focus changes after this type of question – (e.g. *how about temperature, so the temperature plays also important role we all know that*) and focusing – students are guided to focus on the important issues through questions – (e.g. *what we have there. we have coating color*).

Repetition

Repetition on the surface may not seem like an interactional feature in discourse; however, many times it manifests itself as interaction. The dichotomies in repetition relate to unintentional repeats (Biber et al., 1999) (e.g. *and*, *and*, *and*), and reformulations (e.g. *the latest last transition*), which are used for various functions, but occur spontaneously. The intentional repetition, also called 'deliberate repetition' by Biber et al. (1999), includes lexical (e.g. *this binder so binder concentration*) and rhetorical (e.g. *wood is a hydroscopic material and it means that wood can, can take in water*) repetitions which function as

rhetorical devices, mostly for emphasis as well as for organizing device. Repetition also involves repetition of self and of others.

3.4.2 Interactional Features, their Location and Quantity

In order to locate the above described interactional features, both the manual and the computer-aided processes were used. The transcriptions were searched for all these features first by using the most typical forms of each of the feature (e.g. imperatives, wh-questions, and interrogatives) by using the Microsoft Word® search-function.

After this general investigation, a more detailed search was conducted by reading through each transcript and by manually tagging all interactional features considered in the present study. This allowed the use of WordSmithTools® (Scott, 2004) to locate the tags and, consequently, to quantify the interactional features. This program was also used in creating word lists through which the most salient, field-specific words were identified. These lists were also helpful in locating repetition in lecture transcripts.

When quantifying the interactional features, it was deemed that normalizing any of the quantities, e.g. words per minute, would not bring forth more valuable information than the use of the actual numbers. All the lectures were recorded for approximately an hour (46 – 63 minutes), which already makes them comparable.

The approach in this study provides information not only on a specific Master's Program but also on ELF. The present study has considered the guidelines set by previous ELF research in it by focusing on naturally occurring data as well as by exploring ELF in its own right rather than comparing it to ENL (Jenkins et al., 2011). Gaining descriptive information on how ELF is used in various settings increases our knowledge on it and allows, for example, making more informed choices on future research on ELF.

3.5 Organization of the Phasal Case Study

As illustrated through figures and description of the present study, the exploratory, descriptive nature of it has revealed information gradually and the research questions listed

below emerged only through a phasal investigation of the various aspects of this case study (see Section 3.3):

To provide information on whether the Master's Program equips the students for the future working life, an investigation was conducted regarding how English is used in the working life of (paper) engineers. Since the Master's Program was previously conducted through Finnish and because some of the students and lecturers felt the change was not for their benefit, an investigation on student performance in both Finnish and EMI Master's Programs was conducted. These two investigations pertain to the case-external part of the study, which also add to the well-rounded description of the case and, therefore, cannot be seen as completely separate from the case.

To examine the Master's Program as a whole, student perception of lectures in it was investigated first. This investigation showed clear differences, which were, after a thorough scrutiny of the lecture transcripts, seen to be linked to the use of interactional features in lectures. This led to the main focus of the present study to being turned to how these interactional features are used in ELF lectures. These two questions are essential to this case study.

In order to provide an even more comprehensive picture of the present case, the interactional features and their use was compared in challenging and accessible lectures. To further shed light on EMI and whether there are differences in the use of interactional features in L1 and ELF, an investigation of two lecturers in Finnish (their L1) and in English was conducted.

The point of having these three different levels of investigation, first regarding working life English, then regarding the Master's Program lectures in light of student perception, and finally regarding specific lectures and their linguistic differences, was to provide a comprehensive picture of the present case and, consequently, reliable results.

4 Findings on the Use of English at Work and in Studies

This chapter starts from the working life English and then proceeds to the comparison of this Master's Program in Finnish vs. in ELF. This comparison is followed by an overview of the EMI Master's Program.

4.1 Working life English Survey

Since the goal of a Master's Program is to educate students to gain a Master's degree, the School of Chemical Technology goals stated the following:

> The graduates, Masters of Science (Tech.) and Doctors of Science (Tech.), are employed in versatile positions within the major industrial fields in Finland, such as forest based industries.[16]

Although this is one of the Aalto University 2012 goals, the goals were essentially the same when the data were gathered in 2006. The aim of preparing students to work within the forest based industries leads to a question on what language these graduates use in their working lives. Because this study focuses on English, to discover what type of English is used in the paper business and in which ways, a web-based questionnaire was designed (Appendix 1). The aim of the questionnaire was to determine what type of English the members of the Finnish Paper Engineers' Association use and in what type of situations they use their English in their working lives. Further details of this survey were provided in Section 3.2. The responses can be used to convey an idea to Forest Products Technology Department students on what they can expect their English use will be after their graduation. The questionnaire was completely answered by 349 respondents. Partial responses were eliminated from the analysis. A low response rate is quite typical of the on-line questionnaires, but since the quality of information from the respondents was the key issue, the number of the responses was not viewed problematic.

[16] http://chem.aalto.fi/en/about/

The responses indicate that the informants use English mostly with non-native speakers of English (89%) and that they use somewhat more field-specific language (62%) than everyday vocabulary (48%). Naturally, since the majority of their contacts were with non-native speakers of English, more problems are also encountered with them (69%). It is, nevertheless, worth noticing that this figure is actually lower than the number of contacts with non-native speakers (89%). In other words, it is not always problematic to use English as ELF. Similar findings have also been recorded by Mauranen (2006).

What are the situations in which English is used? Most of the informants use English as a spoken language in interactive situations. Table 4.1 below indicates the situations where English is used. When calculating the total averages of the spoken versus the written language situations, English is used 14 percent more in speech-related situations compared to the writing-related ones. The respondents were asked to mention all of the situations in which they use English, thus the percentages indicate how many of the respondents use English in the listed situations.

Table 4.1 Situations of English Use (Suviniitty, 2007)

Situation		Percentage of the respondents
Spoken	Meetings	92%
	Telephone	93%
	Other Conversations	82%
Written	E-mail	98%
	Report Writing	88%
	Writing Articles	39%
Mixed	Other	13%

This table further indicates that e-mails are used very frequently, only two percent of the informants did not use English in e-mail. The difference between the use of written and spoken modes of English is important when relating it to teaching: it is essential for the students to learn to use their English in various spoken communicative situations.

Furthermore, the study indicates that English is used daily or weekly by 96 percent of the respondents. These results are similar to Stotesbury's (2003: 105) findings on how business executives evaluated the importance of English in various business activities. Her study indicates the importance of spoken language, but also includes e-mails as the most important written skill.

Despite their frequent use of English, the problems paper engineers encountered are quite infrequent. Only 16% encountered problems on a daily or weekly basis. Out of these problem situations, as discussed above, 69% were encountered with NNSs, as the contact with them was also higher than with the NSs. Table 4.2 below indicates both the frequency of use, as well as the frequency of problems.

Table 4.2 Frequency of Use and Problems (Suviniitty, 2007)

Use vs. Problems		Amount
Frequency of Use	Daily	77%
	Weekly	19%
	Sometimes	4%
	Hardly ever	0%
	Total	100%
Frequency of Problems	Daily	5%
	Weekly	11%
	Sometimes	48%
	Hardly ever	35%
	Total	100%

Since only sixteen percent of the respondents encounter problems daily or weekly, and especially since one third of the respondents are faced with problems hardly ever, this would indicate that English works as a successful communicative tool among these paper industry informants.

Breakdown in spoken communication appears to be the most frustrating problem for the respondents. The main problem mentioned by the respondents was not being able to understand the other persons' English on the account of their pronunciation. However, ranking the reasons for the problem situations appeared fairly difficult: only 293

respondents (84%) filled this part of the questionnaire completely. The percentages in the following table (Table 4.3) are calculated based on those who responded to all parts of this question, i.e. total of 293. The informants felt their interlocutors' spoken skills were the leading cause of problem situations. 28 percent placed it as number one reason. When compared to the informants' own receptive skills, only 11 percent ranked that as the most important reason for problematic situations. Table 4.3 below indicates the informants' view on the reasons for the problem situations.

Table 4.3 Problem Situations in Percentages (Suviniitty, 2007)

Problem Reasons in the Order of Importance (1=most important, 7=least important)								
	1	2	3	4	5	6	7	
Spoken Skills Other	28	20	16	19	13	4	0	100
Spoken Skills Self	25	15	10	13	17	14	6	100
Receptive Skills Other	14	18	21	18	16	10	3	100
Receptive Skills Self	11	17	20	17	14	15	5	100
Written Skills Self	10	14	12	14	16	22	11	100
Written Skills Other	4	14	20	11	20	25	7	100

Most respondents felt that the others' spoken skills play the largest role in the problem situations. Since the respondents work in paper manufacturing, their contacts are often in Asia[17]. This, again, relates to Stotesbury's (2009) questionnaire study on business executives' needs on their English. Stotesbury (2009: 116) notes that the executives "gave workable ideas concerning the most needed skills, such as deciphering the meanings of particularly Asian speakers at both conceptual and linguistic levels".

Written skills seem not to be of importance regarding the problems according to paper engineers. They did consider their own spoken and receptive skills as fairly important in the problem situations.

[17]Paper production is increasingly moving to Asia, see http://www.forestindustries.fi/statistics/Pages/Default.aspx

English is used by the respondents frequently but with only infrequent problem situations. Some of the most interesting results relate to the informants' views on problems. Since 15 percent of the respondents chose not to rank the reasons for the problems, this would indicate it is fairly difficult to analyze the problem situations. It is also important to remember that a situation which may seem like a problem to someone, to someone else may be normal interaction. Naturally, the more frequent use of spoken language influences the problem analysis: more problems were seen to result from the lack of spoken or receptive skills of other or self. It is also self-evident that written language can be reviewed many times by both the writer and the recipient. Therefore, the communicative goal may be reached even if some problematic issues were included in the written text.

4.2 ELF vs. Finnish – Student Performance Comparison

An issue regarding comprehension and learning in the new, EMI Master's Program was raised by the students at the start of this program. The Forest Products Department Student Guild conducted a survey among the students for this purpose (Section 1.3). This survey and its concerns led to another, small-scale investigation on how students' performance changes when their course grades are compared in the old (Finnish) program to the new (EMI) program to be conducted (Suviniitty, 2009).

Course grades indicate whether the course material was acquired. However, it does not directly show where the students gained the information they needed to obtain a passing mark for the course. How much of the student performance is dependent on lecture comprehension is debatable (lecture comprehension is discussed in Section 2.1.2 and ELF and comprehension in Section 2.3.1). Comprehension is such a complex issue it would be too simplistic to connect comprehension with performance.

With these reservations, course results of ten different courses from academic year 2001-2002, when the courses were held in Finnish, were compared with course results of ten similar courses from academic year 2006-2007 when courses had been transformed into English (Suviniitty, 2009). The courses were not exactly the same, since the university went through major changes in its course structure at the same time as the changes in the

instruction language occurred. The structural change meant, for example, that some of the larger, semester long courses were divided into two term long ones. The contents and the learning goals remained essentially the same. The course results are very similar; virtually the same number of students (91% in the Finnish program and 92% in the EMI program) passed the courses during both of the studied academic years. The interesting aspect of these two different programs is that the number of students attending the courses increased from 197 in the Finnish program to 267 in the EMI program.

4.3 An Overview of the EMI Master's Program

The conducted survey and investigation showed that and EMI and the use of ELF in it prepare students for their future working lives. Therefore, it was time to focus on the EMI Master's Program. To obtain student perspective on it, feedback after each recorded lecture was collected on a paper-based questionnaire from the students who attended those lectures (see Section 3.2). Overall, students' views on lectures and lecturers' English was positive. This section provides an overview on the main results relating to the use of English in the recorded lectures.

When students were asked to evaluate their lecturers' English skills as well as to self-evaluate their own English skills, the results indicate that students perceive their lecturers' English mostly as either *good* or *excellent* and even better than the students' own skills, as Figure 4.1 below illustrates.

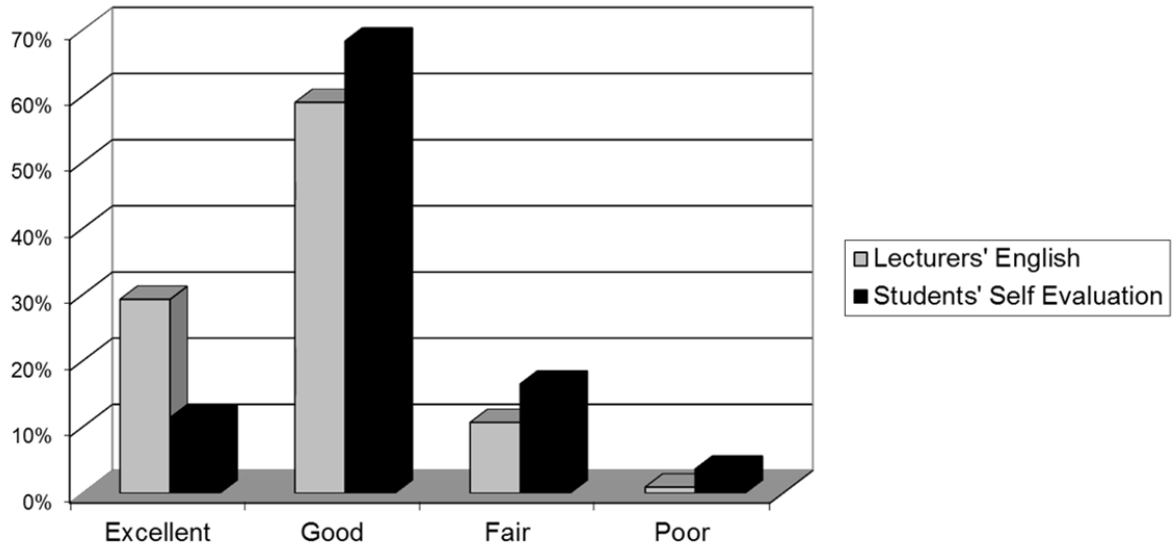

Figure 4.1 English Skills Evaluated by the Students (Suviniitty, 2009)

When we examine the number of students who evaluated themselves as having *excellent* English skills, the percentage is at eleven while the lecturers are at 29 percent. This is an interesting finding when we remember the students' apprehension at the start of the new English program (see Section 1.3).

Despite these results, some students pointed out lecturers' Finnish accents. From the responses to the open-ended questions in the student questionnaire, it could be seen that especially those students who had been in a longer contact with NSs were more critical of ELF speakers. This relates to Jenkins's (2007) thoughts on how especially English pronunciation tends to be dominated by native English ideology.

English, according to student responses in the present study, did not appear to be a problem and lecturers' English was perceived mostly as *excellent* or *good*. How did the students perceive their comprehension on the lecture contents? The results on statements: "I understood the contents of the lecture well" (in grey) and the opposite: "I did not understand the contents of the lecture" (in black) are illustrated in Figure 4.2 below.

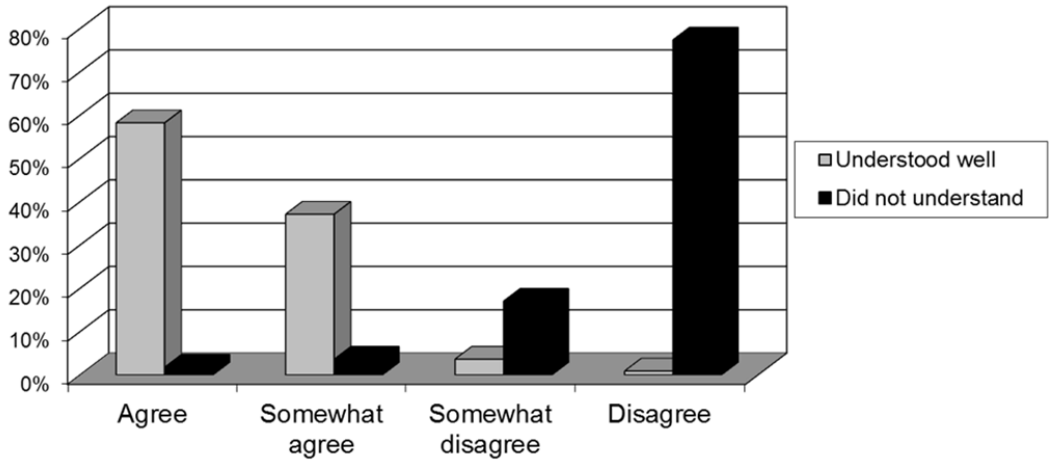

Figure 4.2 *I understood the contents of the lecture well/I did not understand the contents of the lecture* (Suviniitty, 2009)

When using questionnaires in this manner, to ascertain the responses are valid, the use of these types of opposite questions is common (Dörnyei, 2003). Here we see that the students react more to the negative statement than to the positive one. It may be easier for the students to disagree with such a negative statement (*I did not understand the contents of the lecture.*), but committing to the positive one (*I understood the contents of the lecture well*.) may be seen as a conceited response by the students, especially with *understood the lecture **well***. Nevertheless, the students' responses were quite positive on the comprehension issue, just like they were on lecturers' English.

Section 3.2 explains in detail how the comprehension values of each lecture were calculated. Table 4.4 below depicts the lectures in their order of comprehension, just like in Table 3.3 in Section 3.2. In addition to the information in Table 3.3, Table 4.4 also shows the quantities of Finnish, Swedish, and international students, as their presence in lectures varied.

Table 4.4 Lectures in their Order of Comprehension

Lecture Number	Comprehension value	Comprehension value average	Attendance	F	S	I	
06	15.50	3.10	6			6	CHALLENGING
20	16.00	3.20	24	17	2	5	
CL02	16.11	3.22	9	5		4	
08	16.67	3.33	6	1		5	
CL05	16.70	3.34	10	7	1	2	
CL19	16.73	3.35	11	8	1	2	
10	16.78	3.36	9	5	2	2	
12	16.88	3.38	8	7		1	
AL17	16.89	3.38	18	2	3	13	
07	17.00	3.40	6			6	
AL15	17.08	3.42	12	7		5	
16	17.38	3.48	16	9	1	6	
09	17.43	3.49	7	4		3	ACCESSIBLE
22	17.47	3.49	15	9	3	3	
01	17.50	3.50	6			6	
13	17.50	3.50	10			10	
18	17.91	3.58	11	7	2	2	
AL21	18.05	3.61	19	17	1	1	
11	18.75	3.75	8	5		4	
03	18.78	3.76	9	5		4	
04	18.78	3.76	9	4		4	
14	19.25	3.85	4	2		2	

Note: F=Finnish, S=Swedish, I=international

There were four lectures with only international students present, three of which are categorized as *accessible*. Since only ELF situations were recorded, all lectures had at least one international student. Only two of the lectures out of 22 had just one international student present while all the other lectures were attended by more than one international student. When we consider the comprehension value range of 5-20, the overall comprehension values are good, since the lowest one is 15.5 and the highest is 19.25. These results agree with those discussed earlier regarding lecturers' English and the statement regarding comprehension.

When examining these comprehension values, it is worth noting that lecture 22 was lectured by a native speaker of English. This lecture was perceived as one of the accessible

lectures, close to the average in terms of accessibility. It is, nevertheless, closer to the break-off point between accessible and challenging than to the lectures evaluated as the most accessible. This may be due to the faster speech rate or even the fact that not many students were used to listening to a NS lecturer. Students' evaluation of the lecturer's and their own English is shown in Table 4.5 below. It also shows the answers to the same questions after all NNS lectures.

Table 4.5 Students' View on Lecturers' English

	Percent of responses			
	Excellent	**Good**	**Fair**	**Poor**
The level of my English skills in my opinion is				
After NS lecture	27	67	7	0
After all NNS lectures	11	68	17	4
The lecturer's language skills in my opinion are				
After NS lecture	62	38	0	0
After all NNS lectures	29	59	11	1

Students seem to view their English skills as being better after the NS lecture, but we have to remember that the number of responses after one lecture is much lower than when combining the responses from all the lectures together. It is worth pointing out that, though it could be expected that all students would evaluate NS's English as excellent, not all of them did so. When asked to respond to the following: *The lecturer's language skills lack in (1=Vocab, 2=Fluency, 3=Intonation, 4=Pronouncing single sounds, 5=Other)*, six students of the fifteen attendants had responded. Two of them felt that the NS lecturer's language skills lack in vocabulary and four of them felt that pronouncing single sounds was somewhat problematic.

Did students feel they would understand the lecture better in their native language or would they prefer a native speaker of English as a lecturer? These statements were also investigated and their responses are depicted in Table 4.6 below.

Table 4.6 Native Language/Native Speaker Preference

	Percent of responses			
	Excellent	**Good**	**Fair**	**Poor**
I would have understood the lecture better in my native language				
After NS lecture	14	57	14	14
After all NNS lectures	41	27	19	13
I prefer a native-speaker of English as a lecturer				
After NS lecture	33	53	7	7
After all NNS lectures	14	28	30	28

The most striking result from these statements shows that after the NS lecture, 71% of students either agree or somewhat agree with the statement *I would have understood the lecture better in my native language*. Although the difference is not great, 68% of the students felt this way after NNS lectures. This may indicate that students' perception on comprehension of the NS lecture was not as positive as after the NNS lectures.

After the NS lecture, 86% of the students would prefer a native speaker lecturer while this figure is only 42% after the NNS lectures. Consequently, 58% of students showed a negative or at least somewhat negative position on having a NS lecturer after having attended an ELF lecture.

With an overview of the lectures in this EMI Master's Program, we are left with a question regarding why some of the lectures were perceived as accessible and others challenging. As mentioned in Section 3.3.1, the investigation of the outlier units, i.e. those lectures which were at the opposite ends of the continuum, using a thorough examination of the transcripts was the key to the interactional features surfacing as the focus of the detailed analysis of the lectures. The realization that AL21 contained many questions while CL02 contained only few of them, pointed to the need to look at questions in lectures in more detail. From questions the investigation evolved to encompass interactional features from which three (control acts, questions, and repetition) were selected to be covered in the present study.

5 Control Acts as Interaction

This chapter first discusses the control acts in general, then their use in lectures is deliberated, the present data is analyzed, and finally the results are examined. In the excerpts provided, following Stotesbury's (2003: 332) example, only those features which are discussed through that particular excerpt will be italicized. Some excerpts include more than one type of interaction, but the attempt is to indicate clearly the focus of each example.

5.1 An Overview of Control Acts

Control acts, or directives[18] which is used as a superordinate by some researchers, are characterized as speech acts through which the speaker attempts to elicit some type of an action from the hearer (Searle, 1969). Goodwin (2006) described directives as "utterances designed to get someone to do something" (2006: 517). These definitions in themselves include interactivity between speakers and hearers.

Control acts materialize in all types of discourse in various ways and they have been studied extensively, both from the linguistic perspective and from the socio-psychology perspective. Linguistically control acts are interesting since they manifest themselves through both direct speech acts, as imperatives (*Come here!*), and indirect speech acts, for example as questions (*Can you close the door?*). In their 2005 study, Huddleston and Pullum pointed out that imperatives can take on other forms than directives, for example "offers (*Have a pear*), requests (Please pass me the salt), invitations (*Come to dinner*), advice (*Get your doctor to look at it*), instructions (*To see the picture click here*) and so on" (2005: 8). Thus, all imperatives may not necessarily be classified as directives. Holmes (1983) classified directives as using three different forms: imperative, interrogative, and declarative.

[18] The beginning of this chapter uses the terms *directives* and *control acts* according to the way the author in question has used them. The present study views control acts as the superordinate and directives as one of the sub-classes of control acts. Though this may be somewhat confusing, I did not wish to change the terminology of the previous research to that of mine.

In addition to form, directives can be classified according to what action they require. Sinclair and Coulthard (1975) distinguished between directives requiring a physical response and questions requiring a verbal one. Searle (1976) did not draw the same distinction, as for him directives include questions since they expect an action. This already indicates the challenges in categorizing directives. Sinclair and Coulthard (ibid.) included three functions for directives: requests, orders, and threats while Searle (ibid.) distinguished directives mainly as indirect and direct. Indirect directives could not be comprehended as directives without their immediate context (for example someone in the room comments about a draft and someone else gets up to close the window).

Socially directives are of interest because of their potential as face-threatening acts (Brown and Levinson, 1987). The range of studies on this aspect of directives varies from West's (1998) review on how status influences directives to Sanders's (1999) study funded by NASA, which looked at how power influences the way directives are used between pilots and co-pilots and even to a study on directive use at a Morris team meeting (Jones, 1992). These studies have been mostly concerned with identifying the form of the directives used by individuals with varying statuses. Brown and Levinson's (ibid.) Politeness Theory is relevant when focusing on the directive form, as well as on the social distance and how it influences the way one speaks. Some studies have also looked at the differences between spoken and written directives (Biber, 2006) and much research has involved children's talk and many directives in it (Goodwin, 1990), as well as maternal or parental directives (Bellinger and Gleason, 1982).

In addition to the means by which directives are expressed and by whom, Mulholland (1994) has also distinguished between internal and external directives. Internal directives mean those that require immediate action of some sort while external directives refer to those where action is delayed. Trosborg (1995) used the terms requests-now and requests-then on these categories based on Edmonson and House (1981: 99). An interesting finding regarding this aspect was Wisner's (1968) study (as cited in Ervin-Tripp, 1976: 47) which "found that when doctors spoke to nurses, they used imperatives to refer to the present, but 'we' directives to refer to the future".

Another approach to classifying directives is based on their level of directness. In her (ibid.) study, Ervin-Tripp classified directives into the following six categories:

Need statements (I need a match.)
Imperatives (Gimme a match) and elliptical forms like (a match.)
Embedded imperatives (Could you gimme a match?)
Permission directives (May I have a match?)
Question directives (Gotta match?)
Hints (The matches are all gone).
(Ervin-Tripp 1976:29)

Especially the question and the elliptical form in these categories require the hearer(s) to be aware of the context in which the utterance occurs since otherwise it would be impossible to know what is meant by them. Jones (1992) concluded in her study that in order to understand directive usage, the contexts where they are used have to be considered.

It is interesting how Ervin-Tripp (ibid.) viewed the personal need/desire as the most direct of his categories when considering Brown and Levinson's Politeness Theory (1978). Brown and Levinson saw the imperative as the most face-threatening expression and, therefore, imperatives rather than the personal need/desire could be viewed as the most direct category of directives.

Ranking directives according to their directedness based on either the form or speaker's stance would seem like taking quite a narrow view on discourse since, especially for directives, the context in which they are expressed is crucial to their comprehension and that would also influence the perception of their directness.

5.2 Control Acts in Lectures

To look at classroom talk, Sinclair and Coulthard (1975) defined a directive as something where teacher is aiming for the student to do something. Comparing with questions (Chapter 6), directives do not expect a verbal response, but some other type of action.

More recent studies have looked at directives in academic settings, such as Hyland's (2002) study on academic writing and Reppen's (2008) corpus based study on directives in university language, which compared the use of directives in spoken and written contexts. According to Reppen, the way directives are used as organizing devices in lectures is through their varying forms. Students soon realized that when the lecturer was using imperatives, the question most likely concerned course management, exam, or other such matters. When the lecturer used a less direct form, the focus was most likely on a scientific question. Reppen also found that *you need to* is the most frequent of the spoken directives in her study.

Biber (2006) showed how the expression of stance in university registers contained a construction of mental verbs + to-clause. This construction was used in course management, but also for directives (2006:111). Biber found more directive use in the written university texts, such as in general requirements for students. In these cases the forms used are impersonal and indirect (*Failure to do so may result in cancellation of enrollment, credits earned, or both.*) (2006:129). However, the very personal and direct statements could also be found (*To be an effective leader, you must be able to inspire the faith of others in your group.*) (2006:129).

Dalton-Puffer (2003: 11) mapped requests in her CLIL (Content and Language Integrated Learning) study also according to directness and based her categories on Trosborg's (1995: 205) earlier study. Table 5.1 below presents these categories.

Table 5.1 Dalton-Puffer (2003:11) Austrian CLIL Data Mapped onto the Request Directness Scale

Strategy		CLIL example
I.	Indirect Request	
	1 Hints (mild)	*I am not really good prepared for*
II.	Conventionally indirect (Hearer based conditions)	
	2 Ability	*can you pass them round for us?*
	Willingness	*would you like to continue?*
	Permission	*can I go to the toilet?*
	3 Suggestory formulae	xxx n.a. (How about lending me your car?)
III.	Conventionally indirect (Speaker based conditions)	
	4 Wishes	*what I would like you to do later is…*
	5 Desires/Needs	*I want you to write a little heading.*
IV.	Direct requests	
	6 Obligation	*you must return it according to your catalog number*
	7 Performatives	xxx n.a. (I ask you to lend me your car)
	8 Imperatives	*think about that question.*
		Note: *I need to add *let's…* here*
	Elliptical phrases	*Daniel, Andreas.*

This model appeared, at the outset, suitable for the present study. However, when the data in this study was categorized according to the groups listed in Table 5.1, the main categories appeared uninformative as it was not crucial to know whether the directive was hearer or speaker based. The point of departure in lectures is students, though the speaker most of the time was the lecturer. The lecturers did not express the directives to their own benefit – at least not directly. The university professors and lecturers tend to aim at creating an egalitarian atmosphere in the lectures since the idea is that the students and the lecturers are working towards a common goal (see Section 2.1.2).

The similarity between Dalton-Puffer's (2003) study and the present one is how imperative—the most direct form of directives—is used with mental process verbs. This form is also used when the lecturer is listing course requirements or other specific data. It seems that when the lecturers know they are personally responsible for delivering the data, they use a more direct form. This form changes to the less direct ones, for example Dalton-

Puffer's "conventionally indirect", which include modality (e.g. you should, of course you, etc.) with more general and perhaps more scientific topics which can be challenged, unlike the course exam or course requirements. In this way the lecturers establish a common ground for investigating the scientific world and invite the students to join in on it.

It also became evident that giving advice was one of the largest categories of the control acts in the present data and since this was missing in the previous model, another one had to be found or developed. The lecturers act as experts and give advice to the students based on their knowledge, experience, and what they assume students can expect in the working world.

Taking into consideration the aspects of now vs. later, the hearer vs. the speaker, as well as the form through which the directives are manifested, Vine's (2004) model of *control acts* including *directives*, *requests*, and *advice* appeared like a suitable starting point for a model development (see this chapter and Table 5.2 below). Her study is based on workplace interaction and most of the time the analyzed discussions are held between supervisors and their subordinates. This somewhat differs from the organization in lectures, where, despite the lecturers' aim at creating an egalitarian atmosphere, everyone realizes that there is a power distance at play, which, naturally, influences all interaction. Lecturers may, for this particular purpose, use various tools to minimize this power distance.

5.3 Control Acts in Technology Lectures

Vine (2004) differentiates directives, requests, and advice based on three factors: speaker's status (higher, lower, or equal), hearer's right of refusal, and benefit to the speaker. These factors as such were deemed not suitable for the present study since, firstly, the main speaker's status in this study is always higher than the hearers'. Secondly, hearers do not really have a "right of refusal" per se, since the lecturers' control acts are part of the lecture and students are not necessarily asked to comply with the control act immediately or these control acts are related to a mental process verb. Complying with a control act "you have to remember", for example, cannot be easily verified. "Benefit to the speaker" is also irrelevant since the lectures are held mostly to benefit the hearers.

To be able to distinguish between the control act categories, it was necessary to use other factors for this purpose. Table 5.2 below gives an overview of the control act categories and their definitions in the present study.

Table 5.2 Control Act Categories and Definitions

Control Acts	Form-related aspects	Internal/external	Level of force*	Other
Directives (DD)	Imperative	Both possible	High	often a mental-verb connection
/…/ *mark this slide* because this is really one of the key things here. /…/				
Requests (DIR)	No imperative, yes interrogative#	Both possible	Lower	often personal involvement
/…/*i would like* each and every one of you, *try, trying* to find out what it means /…/				
Advice (DIA)	Modality	Both possible	Lower	
/…/ this is the one thing that *you should understand* about wood and fire /…/				
Prohibitive (DPRO)	Negation	Both possible	High/Low	
/…/ you *don't need to think* /…/				
Inclusive (DINC)	"we + verb"	?	Lower	involvement
/…/ *we have to know* the wood modifications /…/				
Impersonal (DIMP)	Passive verb forms	External	Low	distance
/…/ *it is very important to understand* how polymers behave /…/				
Inclusive Prohibitive (DINCP)	"we + verb + negation"	?	Lower	involvement
/…/ *we don't need* how to calculate these /…/				

* The scale used here is high, lower, low.
\# The form in which requests manifest themselves does not include imperative by itself, since it is a request (*please, close the door*) rather than a command (*close the door*). Interrogative use in requests is common (*could you close the door*).

The control acts together with their abbreviations are listed in the left column while their distinguishing features follow in the columns to the right. As already mentioned, some fuzziness is always present when categorizing language and it needs to be considered and tolerated in order to obtain any results at all. As Table 5.2 depicts, the internal/external dimension is acknowledged and it will be examined as part of the analysis. Despite the difficulty in determining the "level of force" which somewhat relates to the directness of

the control acts, it is also investigated and discussed. It is analyzed within discourse context in order to provide a broader view on it.

Directives include those control acts that manifest themselves through imperatives and, when used in classroom management are related to the "here and now", therefore expressing mostly internal directives, i.e. related to the immediate tasks or other issues in the lecture. However, since they are also used commonly with mental verbs, it is difficult to distinguish, whether the understanding/remembering/knowing is supposed to occur immediately during the lecture or later on. The context makes this clear sometimes, though not always.

Requests do not use imperatives, but may use question forms and often also use some sort of a softening device (e.g. modality) of the control act and many times the requests are expressed from the point of view of the lecturer (see personal desire in Biber 2006:141), as in the example provided in Table 5.2 above.

Advice also uses modality and most often it includes second person pronoun (either singular or plural) and, just like directives, is connected to mental verbs. The level of directive force in advice varies depending on the choice of words and the context in which it is expressed, which is, naturally, the case in all of the categories to some degree.

Vine (2004) speaks of *prohibitives* and although I do not have many of them in my data, it seemed beneficial to analyze them separately from the rest of the control acts. Prohibitives are most common in parental directives (see Gleason et al. 1996).

The last three categories, *inclusive control act*, *impersonal control act*, and *inclusive prohibitive control* act, were deemed necessary as the data included them and because these have not been defined as separate categories in previous studies on directives in lectures. Biber (2006) talks about these categories in stance expression and lexical bundles: *we* is discussed in connection with *must* and as a pronoun together with *I* as well as in classroom teaching with reporting and mental verbs as "genuine attempts to encourage student

participation" (2006:143). A combination of *we know* was also found by Biber in connection with information that is assumed to be common knowledge (2006:119).

Inclusive control acts manifest themselves through the first person plural, just like the sample in Table 5.2 indicates. This may be related to the power distance between the lecturer and the students where the lecturer is attempting to establish a common ground and to soften the control act. These cases were also compared to Biber's (ibid.) notion on common knowledge.

Impersonal control act was added to the categories also inspired by Biber (2006), who speaks of the extreme involvement in obligation/directive bundles (*I want you to ...*) in classroom teaching vs. the impersonal ones with no personal pronoun (*It is important to ...*) in textbooks (2006:141). Both of these were found in the present data.

Inclusive prohibitive control act was a necessary category in order to analyze the inclusive utterances in the same manner as the non-inclusive ones.

Table 5.3 below shows how these control acts are distributed in the analyzed lectures and how many of these control acts are related to either mental verbs (MV) or classroom management (CM). Those instances that are not related to either of these are not listed separately in this table.

Table 5.3 Control Acts and their Frequency in Lectures

		Control Act Types							
	Lecture	DD	DIR	DIA	DINC	DIMP	DPRO	DINCP	Totals
Challenging	CL02	0	0	0	1	0	1	0	2
	MV				1				1
	CM								
	CL05	11	4	1	4	0	1	1	22
	CM	5	2				1		8
	CL19	1	0	2	2	2	3	0	10
	MV	1		1	2	2			6
	CM						3		
Totals		12	4	3	7	2	5	1	34
Accessible	AL17	9	1	5	5	2	2	0	24
	MV	1	1	4		1			7
	CM	3					1		4
	AL15	9	4	4	7	0	2	2	28
	MV	7	4	3	4		2		20
	CM								
	AL21	17	1	0	1	1	1	0	21
	MV	16					1		17
	CM					1			1
Totals		35	6	9	13	3	5	2	73

Note: DD=Directive, DIR=Request, DIA=Advice, DINC=Inclusive, DIMP=Impersonal, DPRO=Prohibitive, DINCP=Inclusive prohibitive, MV=mental verb, CM=class management

Before examining samples from each of these categories, we need to review Table 5.3. All lectures have at least one control act expressed in them. Most lectures (4/6) contain more than twenty control acts while only one of the challenging lectures reached that level of control acts. The total number of control acts in accessible lectures was slightly over twice the amount in challenging lectures. In the most challenging lecture, only two control acts were found. The most common type of the control acts was the *directive,* and on closer examination, 62 percent (29/47) of them showed to be connected to mental verbs. Only one of the challenging lectures, CL05, contained a similar number of *directives* (11) as all the accessible lectures (AL17: 9, AL15: 9, AL21: 17).

Inclusive control act was quite frequent as well, but it was intriguing that the *prohibitive* was the only control act type which was present in all lectures while *inclusive prohibitive control act* was used only by two lecturers, one in a challenging lecture (CL05) and one in an accessible lecture (AL15). Another interesting aspect regarding *prohibitive* is that it is

most present in one of the challenging lectures (CL19). Only one instance of *prohibitive* was found at either end of the challenging-accessible continuum.

In comparison with questions (Chapter 6), control acts were also expressed by students. However, in much smaller quantities than questions and only during two lectures, CL02 and CL05, which students perceived as challenging. Student interaction and initiative can be seen as positive actions when they find the lecture not as comprehensible as they would hope it to be.

As discussed, since many of the control acts are connected to mental verbs, we cannot evaluate whether the students comply with the control acts presented by the lecturers, but it was easy to determine that the students' requests were reacted to immediately after they were expressed.

After the presence of control acts was examined in the present data in general, the following sections discus them in more detail through samples. The order in which the control acts are examined is based on their frequency in lectures as presented in Table 5.3, i.e. *directives, inclusive, advice, requests, prohibitives, impersonal, and inclusive prohibitives*.

5.3.1 Directives (DD)

Directives were three times as common in accessible lectures when compared to the challenging ones. Directives can be divided into two sub-categories, class management and other, depending on their aim. Examples 1 and 2 below illustrate how class management operates:

(1) /…/ first of all now our assistants have updated the laboratory work part there <POINTING AT THE SLIDE> so, *go to the web pages*, you will have the (xx) information there and also the days, i think yes, days groups and time, so there will be four individual groups, and so, *use the webtopi system*, as as before, so now you know the dates so *look in your time table and and schedule* how it fits. and if you have neighbors there who do not have possibility to participate today here so *pass the information* that now we know all about the labwork, so i make the the days (xx), and P:12 and there is actually one group which the, the idea is that, the will be held only in

english but i still encourage you to participate if necessary the other groups so it will not be in finnish if i say so. so the idea is that we have english lecturing language is english so you have the right and opportunity to have english also in the lab work. /…/

CL05

This passage includes a cluster of directives and this would be typical of the course beginnings, which is in question here. This class has met a few times, but there are still group and laboratory work organization and scheduling. Since the participation in lectures is not mandatory, the lecturer remembers to direct those present to pass this information to those absent. In this case the directive is geared to external action, something that will take place after the lecture.

(2) /…/ she's here to observe me not you so *you just be relaxed* she's just checking my mistakes so, (xx), okay but i think just for a few minutes in the beginning we'll go back to our tuesday's class we were talking about moisture content /…/

AL15

Example (2) expects internal action, something that is supposed to occur after the directive is expressed. In this case the lecturer explains why I and my camera as well as other equipment are present and directs the students to ignore them and act as if they were not there. In a sense this is more in a way of informing students rather than class organization. However, it is closer to class organization than other directives, which we will review next in extracts (3) and (4).

(3) /…/ when we talk about waste waters and their treatment as process water *you have to understand* why we have to treat the natural waters and what are the quality names of that and of course /…/

AL21

This example of directive use is quite typical since the directives are most often connected with mental verbs. These types of directives guide the students to make at least a mental note of the most important issues during the lecture and thus help the students to structure the information they are discussing.

(4) /…/ what are risk maps of various materials (WRITING ON A FLAP BOARD) so if you have here your wood please *help me* to put some characteristic areas like density and strength moisture thermal properties all those properties we're on wood /…/

AL17

Example (4) shows a less common directive use as this is the only case when a lecturer is directly asking for help in the present data. This was quite surprising as, since as I have noticed myself using this expression to engage and activate my students, I thought others would do it as well. The directive is softened with *please*, which lessens the directive force of this expression.

Directives are used overwhelmingly more in accessible lectures and they can be seen as a device which increases audience involvement (see Section 2.2) as well as a direction providing guidance which helps the audience to focus on those issues the lecturer stresses to be important through the use of directives.

5.3.2 Inclusive Control Act (DINC)

Inclusive control acts were the second most common control acts in the present data. All lecturers used them and often they were connected to mental verbs. Inclusive control acts were twice as common in accessible lectures as they were in challenging lectures (13/7). A specific case of inclusive control acts is the use of *let's*. The most common use of *let's* in lecture settings is to exemplify something like in Example (5) below:

(5) /…/ , but when we are, we have the, the initial moisture content is higher, *let's say* 40 percent and we go to the same kind of /…/

AL15

These instances were excluded from further analysis, the total number of exemplifying use of *let's* was seventeen and it was present in four lectures. Only lecturers CL02 and AL21 had not used the exemplifying *let's*. This is interesting, because these are the lectures at the opposite ends of the challenging-accessible continuum.

As an inclusive control act *let's* was used five times and only in one lecture. This indicates it is part of the speaker's idiolect. In general the findings on *let's* are similar to what Vine

(2004) concluded in her study which points out that in only 25% of the cases *let's* is used as a clear control act. In the present study this number is virtually the same, since *let's* was used as a control act in 23% of the cases. The use of let's as an inclusive control act is shown in Example (6) below.

(6) /…/ this is how it goes the wood actually goes it is (xx) thing but they just measure it by machines. they just drove through and i can take the next one <PLAYING AN INTRODUCTORY VIDEO ON PULPING 30 sec> *let's skip that and go* to next scene <PLAYING AN INTRODUCTORY VIDEO ON PULP 30 sec> /…/
AL17

Here let's is not used to exemplify, but as a collective (verb + pronoun) which includes the speaker and the audience. This is an interesting use of inclusive let's since only the lecturer is able to control the video clip and thus can decide what is watched. Since this is the lecturer who uses *let's* the most, this may be linked to his idiosyncrasy. It is also a way of letting his audience know he is skipping to the following scene instead of just doing it without saying anything. Example (7) below shows similar use of let's:

(7) /…/ but okay, *let's draw* some wood cells here <DRAWING ON THE FLAP BOARD> so this is a wood cell /…/
AL15

Here it is also evident that only the lecturer is holding the marker and can draw on the flap board. In this case, though, the lecturer may indicate with *let's* that the students should also draw wood cells while taking notes.

The use of inclusive control act even excluding the instances of *let's* is the second most common of all the control acts. This control act was used for class management once, and eight times it was connected to a mental verb.

The findings in the present study agree with Biber's (ibid.) findings as his study shows the use of *know* + *that*-clause is used most frequently with pronouns *we* or *you* (2006:82). *Know* is one of the mental verbs *we* is used with in this study as well. Examples (8) and (9) below show how *we* is used.

(8) /…/ or even everyday life in a, in a plywood company it's just something *we need to know* when we are drying the wood. /…/

AL17

The lecturer is indicating the important issues regarding wood drying, but instead of saying *you need to know* she softens the directive force of this statement by using inclusive *we* instead of *you*. The use of *we* in this case refers either to the collective enterprise of the whole group, both the lecturer and the students or, more likely, to the student audience. Biber's (2006) study indicates that *we* often refers to the instructor (*Today we are going to talk about testing hypotheses*.) (2006:143). Example (5) earlier in this section shows this type of use of *we.* Similar use of *we* may be seen also below.

(9) /…/ this is more or less nice to know information i don't actually need to give this more, *we need to look* first at the consequences and then i will come back to describe things more in detail /…/

CL05

In Example (9) *we* most likely refers to the lecturer himself, since this *we* is inserted between two instances of *I*. It is interesting how the lecturer is using *we* in connection with the mental verb, but when he uses action verbs *give* and *come*, he uses pronoun *I*. This sounds quite logical as the whole group can look at the consequences (which, naturally, are provided by the lecturer) but the lecturer is the one controlling what he gives the audience and whether they return to the specific topic or not. This passage organizes the discussion topics and their order rather than is used as class management. However, since it differs from the rest of the inclusive control acts and does relate to class management as the lecturer discusses the order in which the topics are handled, it is grouped in class management.

Inclusives, similar to *directives*, increase audience involvement (see Section 2.2) and, therefore, it was somewhat expectable to find the accessible lectures to contain twice as many *inclusives* as compared to the challenging lectures.

5.3.3 Advice (DIA)

Advice giving through control acts is the third commonest control act in the present lectures. Most of the cases (9/12) are connected to mental verbs while three are other recommendations. Similar to directives, there are three times as many occurrences of advice in the accessible lectures as there are in the challenging ones (9/3). Only two instances of mental verb advice use were found in challenging lectures. Furthermore, no expressions relating to class management were found in the advice category in any of the lectures. Again, examples of the way advice is manifested in lectures are presented below (10) and (11).

(10) /…/ this is the one thing that *you should understand* about wood and fire so this is not only a risk map this is benefit map for steel construction this is a huge problem compared /…/

AL17

In this excerpt the lecturer is pointing out to the students the key issue they should understand. In other words he is advising his students to pay attention to this particular point and attempts to make it clear by addressing it and discussing it through a map he is drawing on a flap board. The use of modality makes the expression softer. However, the surrounding text indicates to the audience that they really have to understand this.

An advice-giving expression not related to mental verbs is shown below (11).

(11) /…/ if you get a chance to visit those places *i highly recommend you do that* cause this is a good place to see some of those but we mostly focus on construction areas /…/

AL17

The lecturer advises the students to visit pulp mills, though they are specializing in mechanical wood processing. The students have just been shown a video of how wood is processed through a pulp mill and since only some of the students indicated they had visited such mills, the lecturer fairly forcefully suggests his audience to take part in an excursion to a pulp mill. This may be related to several factors, one of which is the number of international students in this group, which was the highest (13) in all of the lectures. This

may also relate to the lecture being held at the beginning of the semester with many excursions to various mills usually both domestic and international await the students. This type of strong recommendation on the lecturer's part may intrigue even those students who otherwise would not be that interested in visiting a site not directly related to their personal studies to participate in the excursions.

5.3.4 Requests (DIR)

Four out of six lecturers use requests and most of them are connected to mental verbs (5/8) while only one is related to class management. The following Examples (12) and (13) show how requests manifest themselves in lectures.

(12) /…/ now i think we should have five minutes break and after that we will summarize this part by doing a small pair work, don't disappear during the break *i would like to see you all here* /…/

CL05

This passage includes three different types of control acts, the last of which we will discuss at this point. The other two are comparable to inclusives in Examples (8) and (9) on and prohibitives in Example (15). The lecturer is expressing his wish which is a polite and a non-threatening way to invite students to stay on in the lecture. Most likely the lecturer may have had experiences of students disappearing during the break and cautions against that. When lecturers are not compulsory, the lecturers usually cannot predict how many students are present during the lectures. This lecturer expresses a personal appeal to his students.

The following passage (13) is another way requests are used in lectures.

(13) /…/ what would the, equilibrium moisture content for that be. but *i would like each and every one of you, try, trying to find out* what it means, you can pick up your own humi, relative humidity and your own temperature, and you can use some time for this /…/

AL15

Again there is the personal involvement in this request and, though the action of *finding out* is supposed to take place right then and there, this request was seen as being connected to a mental verb, though in Hallidayan (1978) terms this would be a behavioral verb. In this

case, though, *finding out* means thinking through what the lecturer is explaining, even calculating something, rather than looking for information on the issue. This is a good example of how the types and categories are not perfectly distinct and the classification is not an automatic procedure, but each instance has to be considered separately. Here the personal request appears to be used to mitigate when giving instructions for a task students are to perform right during the lecture. The topic discussed here is *equilibrium moisture content*, which apparently is one of the key issues to comprehend. Through this exercise the lecturer attempts to ensure everyone knows how to calculate it.

5.3.5 Prohibitive Control Act (DPRO)

Prohibitive control acts were present in all lectures, though not in large quantities. This is the only control act category which is present in equal amounts in both challenging and accessible lectures (5/5). These control acts were used with mental verbs and proportionally they were the most used type for class management (50%), though in numbers this is only five instances.

This was perhaps the clearest of the groups, which is also indicated by Examples (14), (15), and (16) as follows.

(14) /…/ okay i had actually this, *i don't need to go* this donnan equilibrium again today because i described that yesterday when we talk about these fiber swelling but of course polyelectrolyte, /…/

CL19

Here the lecturer is discussing the topics of the lecture in a similar manner as the topic organization in Example (16) by a different lecturer. The fact that the lecturer mentions what he *does not have to go through* is also an indicator to the students that the topic is of importance. If some students were not present the day before and missed the description, this should be an indicator to them that they need to either find out from their fellow students what was discussed or they need to study it on their own.

(15) /…/ so two hours later i will put that on the website too for friday so *do not come to this lecture at twelve o'clock* but do come at two o'clock well two fifteen p.m.. i'm gonna write this. okay then /…/

AL17

Example (15) is a typical class management case where the lecturer, after having asked who can come at what time and when, repeats the schedule change through prohibitive and directive. This is similar to the way prohibitive is used in the earlier in Example (5) which is also an example on class management.

(16) /…/ we talk about process waters and their recycling potential in pulp mills and *don't focus on the pulp mills* but understand the ways (xx) of how we can recycle water /…/

AL21

Although the directive force in Example (16) is high, it seems more like advice than directive, or, in this case with negativity, prohibitive. The context of the prohibitive influences the way it is perceived and since the lecturer is informing his audience on what to concentrate on and understand, even strong directive force is mitigated through context of this kind. It appears that advisory utterance co-text takes the edge off the prohibitive and, therefore, more directive force is acceptable than in other contexts.

5.3.6 Impersonal Control Act (DIMP)

The number of impersonal control acts is not that great, only five instances as a whole, but half of the lecturers use them. What makes these cases interesting is Biber's (2006) finding that they are present in written text, but not in classroom talk. These control acts were used in one challenging lecture and two accessible lectures. One excerpt from each lecture is provided below in Examples (17), (18), and (19)

(17) /…/ how they absorb will influence then very much how they also influence the function of of paper chemicals later. so therefore, *it is very good to know* that by changing the properties of of, like ion, that's a charge density of polyelectrolytes we can also change how they, erm their behavior in solution so therefore, /…/

CL19

The lecturer in Example (17) points out the important aspect of the passage he is delivering. Although impersonal, it is a way to indicate to the students what they should remember. This provides the audience with something to grab and it may help with note taking. If we compare this expression with *we need to know*, they are not that different, though the difference in how they may be perceived by the students could be drastic. The inclusive expression heightens the feeling of collectiveness and the students belonging to the scientific community and involvement while the passive expression distances the speaker from the audience and may lessen the perception of involvement (see Section 2.2 on involvement).

(18) /…/ by the way i think that it is not too far from construction areas cause you use a lot of paper and pulp thing *it would be good to know* where it comes from /…/

AL17

The control act in this excerpt could be classified as advice since it is expressed with modality and its context supports its advisory tone.

(19) /…/. okay, i think *it is time to stop* now. /…/

AL21

The last example of impersonal control acts is softened through lecturer's *I think*. This was the clearest indication of class ending and, since it was followed by a directive *push the button* addressed to me, the situation with the video recording may have provoked it.

5.3.7 Inclusive Prohibitive Control Act (DINCP)

The last category of control acts is inclusive prohibitive control act with its three instances in the lectures, one in a challenging lecture (CL05) and two in one accessible lecture (AL15). Although there were such few instances of this control act, since prohibitive control acts were separated from directives, the inclusive prohibitives were also examined separate from inclusive control acts. Example (20) below shows how they manifest themselves in an accessible lecture.

(20) /…/ i didn't go in, very deeply into these theories they are quite, even more complex and at this *we don't need* that kind of theory, *we don't need* how to calculate these, many of these things, we need to understand the <SIC> phenomen </SIC> and not calculate it, but i shall shortly tell it, tell, our /…/
AL15

These two instances are actually a repetition of one. However, since the object of these prohibitives is different, they were counted as two separate items. This passage is a good example of nicely flowing rhetoric with negation first which is repeated and then contrasted with positive *we need to understand*. It appears that the lecturer is attempting to indicate to the students that, though the topic is complex and the theory regarding it is even more complex, they should not worry about it since they only *need to understand it* rather than to *calculate* it. This may be quite a necessary relief for the students since so many of their courses require large number of calculations and as the students may start to worry about having to use a highly complex formula, they may actually miss the comprehension part of the discussed issue.

5.4 Summary

The use of control acts was surveyed in this chapter considering their form and function. Although the categories are somewhat fuzzy, an attempt to categorize all control acts in the present data was made. Some of the categories, namely directives, requests, advice, and prohibitives have been discussed in prior studies (Sinclair and Coulthard, 1975; Brown and Levinson, 1978, 1987; Ervin-Tripp et al., 1990; Jones, 1992; Dalton-Puffer, 2003; Vine, 2004) while inclusive and impersonal control acts have not been examined as their own categories of control acts in prior studies. Control acts are an integral part of lectures and they are used for class management and in connection with mental verbs. Some of the control acts are internal, i.e. the required action is to occur immediately while others are external, i.e. the required action is to occur later and/or at another place.

Comparison of the control act use in the challenging and accessible lectures shows that all accessible lectures had more than twenty instances of control acts while only one of the challenging lectures had as many of them. The other two challenging lectures had

considerably fewer control acts in them. As discussed above, the control acts are directly linked to audience involvement, which most likely is perceived positively by the students. This seems like an important factor in explaining a difference in comprehension values and, therefore, lecture accessibility.

6 Questions as Interaction

This chapter will first look at questions in general, then review their use in lectures and finally show the findings in this study.

6.1 About Questions

A common use for questions is to obtain information. We ask and answer questions in almost every conversation we have. The use of mobile phones has added a specific question at the beginning of a phone conversation in Finland: *Onko paha paikka?* ['Is it a bad place?'[19] i.e. is it possible for you to hold a phone conversation]. Questions, their form and function have also been studied extensively. Since they are so central to language, they are also a routine part of all grammars (Jespersen, 1964; Levinson, 1983; Quirk et al., 1985; Biber et al., 1999).

Questions manifest themselves through interrogatives, though other forms can also be used as questions. The many studies on interrogatives have shown that, in addition to obtaining information, they are useful for many other functions, such as requests, offers, suggestions, threats, invitations, requests for clarification, confirmation, and permission. Since all interrogative clauses are not questions, their other functions have to be considered when we aim to study questions. Table 6.1 below depicts the different types of interrogative clauses and their functions.

[19] All translations are mine, unless otherwise stated.

Table 6.1 Interrogative Clause Forms and Functions

Form / Function	Wh-questions	Yes/no questions	Alternative questions
Asking information	X	X	X
Rhetorical question	X	X	(X)
Exclamation	X	X	
Directive	X	X	
Backchannels		X	

Despite the multitude of uses they have, interrogative clauses are usually categorized into three main types: wh-questions (Q-word questions), yes/no-questions (polar questions), and alternative questions. Questions are far more common in conversation than in writing (Biber et al. 1999). Their presence in conversations relates directly to the interactive nature of questions. The X in this table indicates how the function manifests itself through the certain question types. A typical example of questions is presented below:

(21) /…/ *who was here* last time./…/ CL05

According to Biber et al. (1999) when questions are found in news or academic prose, they have rhetorical purposes as the readers are not expected to respond the questions. In conversation, however, they are seen as strong assertions (Greenbaum and Quirk, 1990). Rhetorical questions in monologues are used as attention getting and focusing devices, or used even for humoristic or ironic purposes (Thompson, 1998). These rhetorical questions are also found in lectures (Example 22)

(22) /…/ *what does* bound water *mean*, bound water means that it is /…/ AL15

Exclamations (23), directives (24), and backchannel (25), which manifest themselves through interrogative clauses are all frequent in conversations.

(23) *Isn't* that lovely?! (Biber et al. 251:1999)
(24) *Will* you behave?! (Biber et al. 251:1999)

(25) She's a teacher. Oh *is she*? (Biber et al. 251:1999)

In addition to the above mentioned clauses, tag questions are also commonly used in conversations. Most often tag questions function as a confirmation device:

(26) I'm late, *aren't I*? (Swan, 2005: 471)

Biber et al. (1999) have found that most frequent formulation of question tags is like Example 26 above: a positive statement *I'm late* is contrasted with a negative tag *aren't I* or vice versa. However, also positive – positive tags are possible.

Stenström's (1984) study focuses on questions and their meaning in discourse. Her data consist of speech situations obtained from the London-Lund Corpus of Spoken English varying from prepared oration to spontaneous conversations. In addition to the most common uses of questions, Stenström mentions social interaction, entertainment, and even a precursor for specific action as functions of questions. The question patterns in her study are based on the purposes of the question sequences and the categories range from cases where questions and replies are used solely for social purposes to those where a specific action is required as a result of the question – answer sequence.

Questions also manifest themselves indirectly as embedded questions. In Standard English indirect questions apply the subject – verb word order. This is not always observed in the present data as the following example indicates:

(27) /…/ do you know *what is* the threat of pulp and paper industry. /…/
AL21

This is comparable to Ranta's (2009) succinct discussion of embedded inversions. This subject – verb inversion may be seen as transfer from certain L1 languages (Bolander, 1988; Rizzi, 1996); however, research (Filppula, 2000; Hilbert, 2008; Sand and Kolbe, 2010) has shown that inversion occurs in native English and its dialects as well as outer circle Englishes. Furthermore, since the L1 of lecturers in the present study is Finnish and since embedded inversion is not a feature in Finnish (Karlsson, 1983), in the present data embedded inversions cannot be seen as transfer from L1. Consequently, categorizing

inversion simply as L1 transfer is a very narrow view on it and does not have a foundation for it.

Questions, especially in conversations and in their most common uses, expect to be answered in some manner. In general, questions may at first appear innocently approachable and even simple, since they are so common and the three forms they use are fairly easy to identify. A more thorough investigation of the use of questions, nevertheless, leads to areas of overlapping definitions.

6.2 Questions in Educational Discourse

Since the data used in this study is lectures, we are speaking of a specific context and setting in which most of the *dialogic* interactive features are not present. However, as Mauranen (2009: 203) stated: "it is nevertheless important to bear in mind that using language is always also interactive". One of the ways in which interactivity manifests itself during lectures is through questions, even when they do not always result in question – answer sequences.

Educational discourse has been explored for decades. To analyze classroom discourse, Sinclair and Coulthard (1975) formulated a model based on the basic teacher – student interaction: ask – answer – comment, which became opening move, answering move, follow-up move and is known as the 'Birmingham Model'. McCarthy (1991) based his model of initiation – response – follow-up on the Birmingham Model and uses it to analyze classroom discourse, which he describes as more formal than, for example, conversation. This type of speech is identified as typical "teacher talk" which, according to McCarthy, should be balanced with what he calls "real communication" (1991: 18).

Since lectures can be seen as the university classroom discourse, their educational environment is similar to classrooms. The Birmingham Model has been the basis for studies focusing on monologue structure (Coulthard and Montgomery, 1981) which includes lectures. Simpson (2004) explored formulaic expressions in academic speech and classified expressions based on their pragmatic purpose and she placed questions in the

"mostly interactive" category. Young's (1994) study of macro structures in university lectures saw questions as lecturers' means to establish contact with their audience. Her study identified different phases in a lecture, such as discourse structuring, conclusion, and evaluation phases. The use of questions, according to Young, identifies the interactional phase of lectures.

Several studies have focused on questions in either lectures or academic speech in general. Fortanet's (2004) study on interactional features in lectures used a broad definition of rhetorical and non-rhetorical questions which are similar to Thompson's (1998) audience and content-oriented questions. Fortanet, however, does not divide these categories any further, which provides fairly superficial information on the use of questions in lectures. This categorization has been used, nevertheless, in other recent studies, e.g. by Björkman (2010).

Morell's (2004) investigation of lectures and interaction in them resulted in four different types of questions: referential (looking for unknown information), display (looking for verification of student knowledge), rhetorical (looking for no answer by the audience but usually answered by the lecturer), and indirect (looking for a non-verbal response from the audience, e.g. a raise of hands). In addition to these question categories, Morell's study includes three different types of negotiating meanings: clarification requests (looking for a repetition of the previous utterance *What did you say*?), confirmation checks (looking for confirmation on what was said *This Thursday?*), and comprehension checks (looking for assurance of comprehension *Did you understand?*).

Morell's (ibid.) categories for the most part appeared useful. However, what Morell called display questions were, in the present study, not seen as much a verification of student knowledge as they were seen as a clue to the lecturer: if students are not able to respond to the posed questions, the issue needs to be clarified further. In Morell's display questions the idea seemed to be the display of student knowledge and, therefore, a perception of a knowledgeable student whose course grade may be influenced by this. Thompson's (1998) study on general academic talk, not only lectures, used a similar, broader categorization of questions similar to Fortanet (2004), but she divided these broader categories of content-

oriented (rhetorical/no response by the audience expected) and audience-oriented (non-rhetorical/a response by the audience expected) questions into sub-categories. Content-oriented questions include questions which raise issues and introduce information while the audience-oriented questions are divided into check questions, evoke audience response questions, and seek agreement questions.

The most refined question categories were provided by Querol-Julian (2008: 103-108), who also used the broader audience-oriented and content-oriented categories. Audience-oriented questions are divided into eight subcategories: check (*Can everybody hear me?*), evoke audience response (*Anyone see a problem with this?*), corrective feedback (*Okay, who's gonna give me a definition of what's alive?*), invitation to formulate a question (*Anything you want to ask me?*), invitation to students' intervention (*Yeah?* –here an apparent reaction to a raised hand or some other non-verbal clue), seek clarification (*You mean the time frame?* – when the teacher wants to clarify what has been asked), seek repetition (*I'm sorry* – when the student asks something and the lecturer does not hear or understand the question), seek agreement (*Seems a bit difficult, no?*). The content-oriented questions include four of them: introduce information (*Why does the disease come back? Well, what happens is…*), rhetorical question (*Who am I, who are you?*), example (*We used to ask questions like did your mother work…*), raise issue (*How do we know that cell populations vary? Let's go back to…*).

The use of this many categories was considered for the present study. The informational value of all these categories was, nevertheless, not seen beneficial as far as the present approach is concerned. Teasing apart category after category may be useful in studies concentrating only on questions, but here a somewhat broader approach was seen sufficient.

As discussed above, Morell's (2004) study, which compared linguistic aspects of lectures, places questions into four categories according to Athanasiadou's (1991) classification: *referential* to obtain unknown information, *display* to demonstrate what students know, *rhetorical* where no response is expected and *indirect* to which some type of action is expected from the students (*who was here last time when we had this*? those students who were present, may be expected to raise their hands). These functions are present in my data,

with an addition of questions as organizers or what Hyland (2004) refers to as "frame markers" to structure the lecture which are similar to what Mauranen (2009) calls "boundaries". Questions, in general, can be seen both as structural devices during a lecture and as interactional devices as their use increases involvement and mutually shared knowledge.

Based on Thompson's (1998) taxonomy, Crawford Camiciottoli (2008) also used the division between audience-oriented and content-oriented questions. Crawford Camiciottoli (2008) also subdivided these categories further in a similar manner to Bamford's (2005) study. The audience-oriented questions include: eliciting response; requesting confirmation/clarification; and soliciting agreement while the content-oriented question include focusing information and stimulating thought.

As research indicates, questions increase interaction among interlocutors and increase involvement even in a monologue (see Section 2.2). Camiciottoli's (2008) study further indicates that questions in business lectures are used in a similar manner as questions in business studies text books. This demonstrates how lectures fall somewhere between written and spoken texts, as indicated in Section 2.1.

As an overview of the questions and how they manifest themselves in lectures, I first focused on the form and searched for interrogative forms in the data. Table 6.1 already introduced most of the question forms found in this study, but in addition to those (wh-questions, yes/no questions, and parallel questions), I have included a fourth category "other" which includes those questions which avoided categorization altogether. Tag questions, as defined above, were missing from the present data completely. Tag questions in the present study do not include checks, such as *okay* or *right*.

As the questions were identified, they were further divided into categories based on their function. My functional analysis is based on a model combined from the models used in the previous studies mentioned above. I have used Thompson's (1998) main categories, *content-oriented* and *audience-oriented* to classify the questions. Although these categories, just like any categories for spoken text, are not perfect, this classification provides a broad

definition which is a basis for further investigation. The *audience-oriented* questions often contain a personal pronoun and tend to expect some type of a response, either a verbal or non-verbal response, such as the raise of hands. The *content-oriented* ones usually do not contain a personal pronoun, are used as rhetorical questions, and are either not answered at all or are answered by the lecturer. I use the terms *content-oriented questions* and *rhetorical questions* interchangeably while Querol-Julian (2008) views *rhetorical questions* as a sub-category of *content-oriented questions*. Fortanet's (2004) categories of *rhetorical* and *non-rhetorical questions* as well as Morell's (2004) classification of lecture questions use a broader view on rhetorical questions, which include all those questions which do not expect a response. An approach closer to the latter view is adapted in the present study though content-oriented questions are also further categorized into more definite groups rather than using only the broad classification introduced by Morell and Fortanet.

Table 6.2 below provides an overview of the question categories and their detailed definitions with examples following.

Table 6.2 Question Categories

Audience-oriented
- Information seeking/checking posed by the lecturer (QAI)
- Information seeking/checking posed by a student (QAIS)
- Didactic elicitation (QAD)
- Invitation (QAO)

Content-oriented
- Focusing (QCF)
- Organizing (QCO)

The questions in the data were first located manually and after that the corpus was tagged according to the question categories in order to ease the compilation of the quantitative data (see Chapter 3). The WordSmith Tools 4.0 program was used in this process, as explained in Chapter 3, both to count the occurrences and as a concordance to see the environment in which these question categories manifest themselves.

6.3 Questions in Technology Lectures

The findings in the present data are presented below providing examples and their analyses as well as quantitative data on the findings.

6.3.1 Audience-oriented Questions and their Definitions

As dividing the questions into two main categories would not provide much information, the audience-oriented questions are further classified into three subcategories All audience-oriented questions expect a response from the audience.

Information seeking/checking posed by the lecturer (QAI)

This category is similar to Morell's (2004) referential and may also contain items included in her indirect questions. These questions are closest to those questions present in dialogues and regular conversations. Their form is an interrogative and they are easily identifiable. Example (28) shows a typical information seeking/checking question:

(28) so *did everybody understand* this, this, this chart we were talking about.
AL15

Information seeking/checking posed by a student (QAIS)

These are identical to the questions above, but they are initiated by the students. Example (29) shows how this is done.

(29) *what's the difference* between fiber tracheids and normal tracheids
CL02

Didactic elicitation (QAD)

This question type resembles Morell's (2004) display questions, but in the present data it is used more as a means for the lecturer to ensure which issues are clear to the students and which need more explaining. In Morell's study these questions were used to display students' knowledge. In some instances in the present data didactic elicitation is also used to activate the students and to have more dialogue in lectures.

(30) so *what does it mean now*, too low water retention. *what does it mean*
CL05

Invitation (QAO)

Literally invites students to pose questions or intervene in some manner during the lecture. This type of question is also included in Querol-Julian's (2008) study named as invitation to students' intervention.

(31) *is there anything that to* <SIC>*quest*</SIC> CL02

This may or may not be seen as inviting by the students: many times these types of invitations do not result in audience interaction (see Querol-Julian 2008).

6.3.2 Content-oriented Questions and their Definitions

The content-oriented questions can be divided into two sub-categories: focusing and organizing (QCO). These are similar to Thompson's (1998) raise issues and introduce information. Querol-Julian's (2008) model includes these, but also separates examples and rhetorical questions as sub-categories of content-oriented questions. Since rhetorical questions in the present study are viewed as all those questions which do not expect an answer from the audience, Querol-Julian's categorization was not seen feasible.

Focusing content-oriented questions (QCF)

Focusing questions include those questions which introduce information and provide examples, such as Example (32) below.

(32) *what we have there*. we have coating color where we have this dry matter mix there so it's in a way it's dispersion we have there a layer near
CL05

When a question was answered by the lecturer without repetitions or paraphrases of questions as well as without longer pauses (. or <P:X> in transcripts), the question was viewed as a focusing content-oriented question. Bamford (2005) based her selection solely on adjacency pairs provided by the lecturer, but I have expanded this category somewhat to

include the examination of the pauses. This is based on the interactivity of the lectures in the present data. Some adjacency pairs may be meant to be answered by the audience and pauses and repetitions of questions are a good indicator of this.

Organizing (QCO)

The organizing questions allow the lecturers to move from one topic to the next as well as provide the students with cues about this.

(33) *how about temperature*, so the temperature plays also important role we all know that CL05

In the present data, it appeared quite clearly that at times questions were used as transitional devices moving from one topic to the next or even to drop the previous topic altogether. When a topic change was involved, those questions were deemed organizing content-oriented ones, which warranted another sub-category for them.

Table 6.3 below depicts the relationship between the form and function of questions together with their quantities in the present data.

Table 6.3 Relationship of Question Form and Function

	Function						
Form	QAI	QAIS	QAD	QAO	QCF	QCO	Totals
Wh	14	7	86	0	50	12	169
yes/no	20	26	33	9	2	0	90
parallel	0	1	1	0	1	0	3
other	6	0	2	2	0	0	9
totals	40	34	122	11	53	12	272

Note: QAI=Information seeking/checking, QAIS=Information seeking/checking by students, QAD=Didactic elicitation, QAO=Invitation to pose a question, QCF=Focusing, QCO=Organizing

Wh-questions are the overwhelming majority of all questions in the lectures, a result partially similar to what Crawford Camiciottoli (2008) found in her contrastive study on questions in business lectures and written text. The wh-questions in the present study are the majority in both audience-oriented and content-oriented questions. In Crawford Camiciottoli's (2008) study, audience-oriented questions were mostly yes/no questions while content-oriented questions were mostly wh-questions. A further difference is the number of questions in the present study: the audience-oriented questions (N=172) clearly outnumber the content-oriented ones (N=65) while Crawford Camiciottoli's study shows an almost equal number of both types of questions.

When we further investigate the function of the questions, we can see that students also use the first category of questions, information seeking/checking. In two instances the students also asked questions in Finnish. For example, a student asked in Finnish for a clarification of what had just been lectured. Another time, a student asked for confirmation on whether he had understood an issue correctly.

As Table 6.4 below depicts, lecturers tend to use one question type more than the other and this is also evident in the way questions are used in lectures. However, other issues may be responsible for the number of questions in lectures. For example, the atmosphere in lectures may be such that students do not feel they can ask questions. The lecturer may feel that there are so many issues to deliver during the lecture that there is no time for questions.

Table 6.4 Question Types and their Manifestation in Lectures

		Question types						
	Lecture	QAI	QAIS	QAD	QAO	QCF	QCO	Totals
Challenging	CL02	2	18	0	3	1	0	24
	CL05	1	1	8	6	20	11	47
	CL19	1	0	0	0	5	1	7
	Totals	4	19	8	9	26	12	78
Accessible	AL17	22	11	62	0	10	0	105
	AL15	1	1	0	1	5	0	8
	AL21	13	3	52	1	12	0	81
	Totals	36	15	114	2	27	0	194

Note: QAI=Information seeking/checking, QAIS=Information seeking/checking by students, QAD=Didactic elicitation, QAO=Invitation to pose a question, QCF=Focusing, QCO=Organizing

The lectures in the table above are in their order of comprehensibility from the least to the most accessible. Lecture CL02 was found the most challenging of these six lectures while lecture AL21 was found the most accessible (see Section 3.2.3 for details on determining lecture accessibility). When we look at the total number of questions, we can see that there are two lectures, CL19 and AL15, in which very few questions were expressed and yet in

the continuum challenging – accessible, CL19 is one of the challenging lectures and AL15 is one of the accessible lectures.

Comparing the number of questions in challenging and accessible lectures, we can see that there were 2.5 times more questions in the accessible lectures than in the challenging ones (196/78).

The number of student questions (N=18) in CL02 indicates that students required further information and were active in requesting it. It also shows that they were given the opportunity to do so. Despite this type of interaction during the lecture, students found this lecture challenging. Another lecture where students were almost as actively posing questions (N=11) was AL17, which students found accessible. The total number of questions in this lecture was 105, which is remarkable considering the recorded time, which was one hour for all the lectures (see Section 3.1.1). In lecture AL17, almost two questions per minute were asked, yet the lecture was organized in the manner of traditional lectures and not, for example, in a workshop or seminar style.

As Table 6.4 indicates, not only the number of questions but also the type of questions used in lectures varies. In the following the question types are discussed and analyzed individually.

6.3.3 Analysis of the Audience-oriented Questions

As mentioned above, the audience-oriented questions expect a response of some type, either a verbal one or, for example, a raise of hands. The three sub-categories of audience-oriented questions include information seeking/checking, didactic elicitation, and an invitation to ask or comment. Students use the information seeking/checking in all lectures but one of the challenging lectures.

Information seeking/checking by the lecturer

Lecturers seek for information regarding students' prior knowledge on the issues discussed during the lecture as well as to find out factual information. Examples (34) – (37) below show how these questions were used in the lectures.

(34) L: /…/ you take the sludges from for example activated sludge plant and you rise the total solids content using different kind of equipment *would you remember what kind of equipment*. no. there is a one one possibility centrifugal treatment of course <FINNISH> tai </FINNISH> centrifugal forces you can use them but i think that *what is that wire er press. you know that press*,
S2: yes
L: okay you use that to increase the total solids and you put that total solids on that sludge together with bark and wood and you can burn it in solid fuel boiler, okay, very good.

AL21

This excerpt shows how the lecturer is first checking whether the students remember what equipment they had discussed previously and then starts to tell students what he was referring to. The lecturer then asks students whether they know what wire press he is talking about and when he gets a positive response, he is satisfied with it and moves on rather than keeps asking for the exact name of the press.

Information seeking/checking questions are also needed for class management as passage (35) below indicates.

(35) /…/ there will be a change that that fifth october from twelve to fourteen <WRITING ON A FLAP BOARD> no lecture and then comes my question if the lecture is from two to four *who can come* <GAZING AT THE AUDIENCE, STUDENTS RAISE HANDS> okay we will then have a lecture from fourteen to two there will be lecture so two hours later i will put that on the website too for friday /…/

AL17

The excerpt above is a straight forward case of class management and the lecturer's question and the following students' raise of hands is a short dialogue which results in the change of the lecture time. What makes this exchange interesting is the use of

metalanguage *then comes my question* perhaps as an attempt to further increase students' attention or to maximize clarity.

Lecturers also attempt to gain information on how much they need to explain and what their students already know, which is depicted below.

(36) /…/ however after this we have a steam stripper *do you know what a steam stripper is* <GAZING AT THE AUDIENCE>, maybe, and steam stripping means that you can take away methanol very easily and then you have extremely pure condensate it is like distilled water however this system needs a lot of energy and this energy has to be produced using char nowadays and when you use char to make this energy this might be steam or electricity /…/

AL21

In this passage the lecturer is discussing a topic and while doing so appears to wonder whether students know what he is referring to. Since his audience also appears somewhat unsure, he elaborates on the term *steam stripping means*…. This is a nice way to first focus the audience's attention on an important topic and then provide information on it when the audience is alert.

In some cases determining the boundaries between information seeking/checking questions and invitation to ask/comment was not very clear. Example (37) is one of the cases where the question could have been classified in either category, but since there was no student comment or question after it, it was viewed as information seeking/checking question.

(37) /…/ so *did everybody understand this, this, this chart we were talking about*. so you have to see the relative humidity from these straight lines <POINTING ON THE SLIDE AS EXPLAINING> and you see the temperature, the dry pulp temperature it says here but the dry pulp temperature is actually the same as the normal temperature, and then you just see the curve here and you can read it, the equilibrium moisture content /…/

AL15

It was not clear whether some students appeared not to have understood the chart the lecturer was discussing. Students did not appear to indicate strongly that they had

understood the chart and, therefore, the lecturer of one of the accessible lectures, nevertheless, explained it again as a precaution before continuing.

In some cases when students fail to respond to the didactic elicitation questions, lecturers revert to the use of sarcasm to show that they should know this issue already. Examples (38) and (39) show instances of this.

(38) L: /…/ nowadays we have er we have very very er tight rules for the effluent quality and do you know who gives those qualities for effluent. *have you been in the basic course*. no.
S2: <FINNISH> ympäristöviranomaiset [‘environmental protection agency’] </FINNISH>
L: ok that’s ver. that’s a right answer er we have in here we have environment erm system in finland /…/
AL21

(39) /…/ so can someone say what is water retention of coating color, what does it mean, as i said it is very important but you can describe it with your own words what do we mean when we look at water retention of coating color <P:08> *who was here last time when we had this*. at least i was here and i recognize very many faces here. okay. i can do it for you but only this time, okay. so water retention is the ability of the wet coating layer to hold the water phase so the liquid phase in the coating color when it becomes in contact with the base paper /…/
CL05

In (38) the lecturer manages to activate students – or at least one of them into replying but perhaps the student does not know the environmental protection agency in English and replies in Finnish. Apparently this word escapes the lecturer as well, as he searches for words to repeat the student’s reply in English. In (39) students did not allow themselves to be coaxed into responding despite the long pause of eight seconds the lecturer provides in order to obtain a response from his audience. He has already pointed out that the topic is important and perhaps his frustration manifests itself in a sarcastic remark regarding those who were present the previous time when this topic was discussed. It is worth noting that the first example of sarcasm appears in an accessible lecture while the other one is in a challenging lecture.

As we saw above, students may refuse to participate in interaction by not responding to the question the lecturer poses to them. This places students and lecturers at different positions

as the lecturer usually cannot ignore students' questions. However, lecturers can make a choice to lecture in such a manner that interaction during lectures is minimized. Nevertheless, the amount of student/lecturer interaction is not the only indicator to whether the lecture is accessible or challenging from the student perspective.

To see how students reacted to the audience-oriented questions, students' responses to the posed questions were examined. In some cases lecturers repeated their questions until someone responded while in others lecturers surrendered to students' silence and provided the response themselves. Table 6.5 provides quantitative information on students' responses.

Table 6.5 Student Response Quantities to Audience-oriented Questions

	Lecture	QAI	Student response	QAD	Student response	QAO	Student response
Challenging	CL02	2	2	0	-	3	1
	CL05	1	1	8	2	6	3
	CL19	1	0	0	-	0	-
Accessible	AL17	22	20	62	52	0	-
	AL15	1	1	0	-	1	1
	AL21	13	8	52	19	1	1

Note: QAI=Information seeking/checking, QAD=Didactic elicitation, QAO=Invitation to pose questions

Both AL17 and AL21, which are accessible lectures, receive fewer responses compared to the questions they have expressed. This may be partly due to the students hesitating to answer and partly to lecturers repeating the question in various forms until they obtain a response as in the following passage (40).

(40) L: /…/ and consumption finland is still number one in per capita consumption but our absolute consumption is biggest in the united states *why do they use so much sawn timber in the united states. what for,*
S5: their houses are made of wood
L: yeah that's right erm and *what for*,
S5: earthquakes
L: the earthquakes yeah
SU: storms
L: storms
S5: so they can blow away
L: yeah they blow they can blow away yeah that's true. <WAITS FOR MORE INFORMATION FROM THE STUDENTS, GAZING AT THEM> there is a construction system this is true that erm about 90 80 to 90 percent of all north american single houses or small houses including actually pretty large two store houses are made of wood and they use one construction system *which is called*
S3: (xx) frame
L: balloon frame
S3: balloon frame
L: yeah the balloon frame is the other one they used to use that a lot /…/
AL17

In this passage alone, the lecturer asks a question which does not get a response until he modifies and repeats the question. This lecturer uses quite a lot of time in stimulating students' thought by not revealing why the wood consumption in the States is so high. If we think of the time used in this dialogue, we could argue that this lecturer could have delivered far more facts in a lecture had he just said the reason himself, instead of coaxing his students in this manner. Nevertheless, this was one of the accessible lectures and therefore, the use of time in this manner may be beneficial to the students.

In some cases the response is a raise of hands:

(41) *how many have walked on ice* AL17

These types of answers were also counted as student responses.

Lecturers' reaction to students' unwillingness to respond to didactic elicitation varies. Some, such as AL17, remodify the question until students succumb and provide a response while others, like CL05 and AL21, use sarcasm (Examples 38 and 39 above).

Information seeking/checking by the students

Students mostly ask for clarifications, but may also express their frustration or their wish to elaborate on a topic a bit more. Example (42) below shows an incident on request for clarification.

(42) L: /…/ but this is not the only theory. and i actually ca, they're all theories, but this is, what is thought of it please <NAME>
S1: *and this is (definitely also affecting that) relative humidity*
L: yes. temperature is always affecting because the tempi, the higher the temperature the more the same amount of air can hold water the amount of /…/

AL15

In this case, student wants to ensure he has comprehended the influence of the temperature on relative humidity and uses the question to confirm this. As Table 6.3 above indicated, yes/no questions are the most common ones posed by the students. Since the use of English was, at the time of the recordings, somewhat new to Finnish students, there was also a request for a translation to ensure they knew what had been said (Example 43).

(43) L1: /…/ so not to lose too much water with solvents and dissolving particles and of course when base paper is moistening so wetting paper loses its strength. so runnability problems are the compensation here so not only breaks, okay a question
S2: <FINNISH> *otetaaks toi ykköskohta vielä uusiks ei menny ihan* [‘can we take the first part again, i did not quite catch’]</FINNISH>
L1: okay i can have a short, short finnish part, if it’s okay to you, i will translate. <FINNISH>eli mitä tässä nyt käytännössä tulee ongelmia vastaan /…/

CL05

In this case the lecturer has mentioned earlier (see Example 39) how important it is to know these issues. This may have encouraged the student to ask for a clarification in Finnish. This is the only case a student requests a translation in Finnish. There are cases where the lecturer provides translations of terms as well as completes the lecture in a short synopsis in Finnish. These most likely are good ways to ensure Finnish students know what was discussed, but they do not help those international students who speak other languages. This may have an influence on this lecture being one of the challenging ones.

The following Example (44) shows how students want to ensure they have understood a specific term correctly.

(44) L: /…/ now i've got a question who understood what creep is, <CHECKING THE RAISE OF STUDENTS' HANDS> okay about eighty percent twenty percent is still missing the point ah the point is that that that creep needs to be taken into account when you do do all this these things creep is a phenomenon typical of for unhomogenous, ah yeah welcome <GREETS A STUDENT WHO JUST WALKS IN THE CLASS> erm ah unhomogenous material will and anisotropic are different properties for different areas this is what [it is]
S7: [er *with] creep is it (xx)*
L: pardon
S7: *is it reformation or deformation*
L: deformation, yeah it should be deformation it means that /…/
AL17

The lecturer had written the word either unclearly or incorrectly on the whiteboard and the student wanted to ensure she would get it right. Through asking she also avoided threatening the lecturer's face which may have been the case if she had just said that there was an error on the board. Since *about twenty percent* of the students did not raise their hands to show they had understood what the term *creep* meant, the lecturer then explains it again somewhat differently.

Students can also show similar type of frustration as the lecturers in Examples (38) and (39) when trying to comprehend complex issues as Example (45) below indicates.

(45) L: nutrients. yes <GAZING AT HIS AUDIENCE> <GETTING ANOTHER TRANSPARENCY> but here is one picture more about the softwood you can see the early wood late wood, this one are the tracheids softwood is normally more than ninety percent tracheids and the water is flowing inside. inside these tracheids in hardwood we have <CHANGES THE TRANSPARENCY> very big wood fibers and vessels and the water is flowing inside these vessels this is the difference between hardwood and softwood, and you can see here <CHANGES THE TRANSPARENCY> that there are plenty of different kinds of cells more in hardwoods than in softwoods <P:5> <LOOKS AT THE TRANSPARENCY> is there anything that to <SIC> quest </SIC>
S1: *what's the difference between fiber tracheids and normal tracheids*

L: <SIGHING> they have a little at the fall erm in the in the fall they have differences and they are working inside the wood little different type different structure i think that if you are looking about this wood structure identification here it tells what kind and how it's work and so on, i normally have always said that we have only only these wood fibers and vessels because they are the most important for wood mechanists erm it's just the botanics who handle other things
S1: yeah but it's because other teachers they say different things
L: [yes of course]
S1: [cause] erm there's the one says like that you have fibers and you have tracheids the other one said that you have tracheids and doesn't mention fibers and you were talking about fibers and i just wanted to know *what's the difference between fibers and tracheids*. so i still don't have a clear answer to this and that's the whole point
L: it's so that when we are talking about these fibers they are a little smaller than the tracheids in [softwood]
S1: [so it's] just a name in hardwood you call it fiber and in softwood you call it [tracheid]
L: [yes]
S1:[okay] erm *and the function is a little different comparing hardwood and softwood so that's why you make the distinction both are like erm it's a it's a wood [cell]*
L: [yes]
S1: [okay]

CL02

In this excerpt student's frustration can be heard through his voice and a demand for answers. Since the question is of an international student, he cannot resort to Finnish for explanation, but has to keep asking for clarifications in English. This can appear even rude towards the lecturer, but is, nevertheless quite understandable since the student has come to another country to obtain expertise on a subject and then finds conflicting terminology.

Students initiate questions mainly in two lectures, one of them a challenging lecture and one of them an accessible lecture. Table 6.6 below depicts the quantities of student questions in lectures.

Table 6.6 Student Questions in Lectures

	Lecture	Question type QAIS
Challenging	CL02	18
	CL05	1
	CL19	0
Accessible	AL17	11
	AL15	1
	AL21	3

Student frustration was only present in CL02. In my view, lecture CL19 was more complex in terms of subject matter and topics discussed, but there were no student questions asked in that lecture at all. This may relate to the lecturer in CL02 inviting students to ask questions, which did not occur in CL19.

Didactic elicitation

Didactic elicitation is "teacher talk" which, according to McCarthy (1991), should be balanced with what he calls "real communication" (1991:18). Didactic elicitation was present in three out of six lectures as indicated in Tables 6.4 and 6.5 above. Two out of these three lectures, AL17 and AL21, which used didactic elicitation the most, were found accessible by the students, AL21 being the most accessible. The number of didactic elicitation questions in these lectures was high: AL17 contained 62 of them and AL21 52 of them. A challenging lecture CL05 had eight didactic elicitation questions in it.

We have already seen in Examples (38) and (39) how lecturers may revert to sarcasm when students do not respond to their questions. Most of the times, though, lecturers keep asking until they obtain a response from their audience as indicated by the following passages (46) – (48).

(46) L: /…/ normally we see problems and too low water retention. so *what does it mean now, too low water retention. what does it mean* <P:10> <GAZING AT THE AUDIENCE> *high or low flow of water, from coating to base paper, which one*.
S1: low
L: if you have low retention so low ability to keep the water phase.
S1: okay
L: *could it be vice versa*. so we have higher flow from coating very good then. at least someone had the guts to answer.

CL05

The lecturer provides ample time for the students to formulate their answer, but apparently this issue is not as self-evident as perhaps assumed by the lecturer. He may also want to make a point of it and help students to remember this better by insisting on a student response rather than continuing and responding himself. The situation becomes quite tricky as the student who finally responds, provides a wrong answer. In CL05 interactional phases are not that frequent despite the attempts by the lecturer. It is difficult to show that the response is not right while at the same time encourage students to respond when these situations can be hindered by the fear of an incorrect answer.

Example (47) shows a typical and non-threatening exchange with didactic elicitation.

(47) L: strength per density of wood is much better than than for example steel which is much better than concrete however there are some better materials than wood *can you mention any*. with this measurement so strength per density and we could put that which is pretty close to weight
S2: glassfiber
L: glass fiber *where would we use glassfiber. where do we use it*
S2: boats
L: boats very good do you like boating.
S2: i do yeah

AL17

This lecturer has already shown by his previous questions that he wants a response. Students are also used to his style of more than one question per minute and thus tend to respond to the posed questions fairly quickly. This excerpt shows how it is possible to express as many questions as this lecturer does in one hour: after a response he immediately elaborates on it and as the student responds, yet another question follows.

The last passage containing didactic elicitation shows how this lecturer first abandons the idea of demanding a response from the students but after having moved on somewhat, returns to it again.

(48) L: /…/ *why you cannot recycle water, er er again and again without any purification do you un do you know why*. because the impurities will be er er the amount of impurities different kind of without purification will increase and when they increase *what's happen then*
SU1: corrosion
L: corrosion is one per er one important thing er what what *what else will be happen.*
S3: precipitation
L1: precipitation, very good,
AL21

This lecturer also uses the tactic of elaborating immediately after a student response, which results in the large number of questions present in this lecture as well.

Invitation to pose questions/comments

These types of questions were present in four lectures, but in low quantity (see Tables 6.5 and 6.6). Two of the challenging lectures, CL02 and CL05, had three and six of these questions respectively. Two of the accessible lectures, AL15 and AL21 each contained one of these questions. These questions were used not only as an invitation to students to ask and comment but also as a transition from one topic to next. How these questions manifest themselves is indicated by Examples (49) – (51) below.

(49) L: okay, but, *does anyone have anything to say at this point*. if not i will go and have small repetition on water retention.
CL05

(50) L: /…/ so they will be changed from neutral to the alkaline or from neutral to the acidic, *do you have any questions concerning this bleaching.* okay. okay then we talk about precipitation control
AL21

Both (49) and (50) show this dual function of this type of question. Students are given the opportunity to ask and the lecturers pause, but if the students do not speak at that point, then the lecturers move on to talk about another issue.

Example (51) differs from the previous ones since students have been invited to pose a question and after a student asks a question, the lecturer responds to it:

(51) L: /…/ we can stabilize it stabilize it by using heat treatment or some chemical method. then i talk erm *is there need to ask if you need to just ask if there is something on your mind* <GAZING AND NODDING AT THE AUDIENCE>
S1: heat treatment is during the compression or not
L: <SIGHS> we can use both we can make during the compression but because the compression time is so expensive it is better to do after that in an oven kiln using normal heat treatment methods /…/
CL02

This passage shows that providing students opportunities to interrupt and ask questions during the lecture may help reach unexpressed problems in understanding. This most likely helps more than just one student in the group and also indicates to the lecturer which parts may be necessary to explain in more detail or in a different manner.

6.3.4 Analysis of the Content-oriented Questions

Even those lectures with less actual dialogue in them can and do have interactional features. The content-oriented questions serve similar purpose as rhetorical questions. In this study the functions of these questions are classified as focusing and organizing. This division was adapted from Crawford Camiciottoli's (2008) study which was based on Bamford's (2005) study on lecture questions and answers. Crawford Camiciottoli used a division focusing and stimulating thought, but when the present data was searched for these categories, it became evident that the stimulating thought type questions were not present in it. However, there were two different types of content-oriented questions. The first one could be defined as focusing while the other one could be seen as organizing.

A highly noteworthy issue regarding these content-oriented questions is the fact that they are more present in the challenging lectures (N=38) than in the accessible ones (N=27) (see Tables 4.3 and 4.4). The organizing category is completely missing from the accessible lectures while there are twelve instances of them in the challenging lectures.

The following passages provide an overview and analysis of these question categories.

Focusing

The focusing content-oriented questions, as defined above, contain those questions which focus the audience's attention to the issue at hand.

Table 6.4 above depicts the total number of focusing questions (N=53). The majority of these are wh-questions. Examples (52) – (53) show specimens of focusing questions.

(52) L: /…/. so *how the properties in the filter cake when it's forming, during this coating affects to dewater so what kind of pressure drop for instance we create for this way* so two things this positive liquid phase and the pressure drop in the filter cake and this last thing here actually says what we need in, in practice /…/

CL05

The lecturer's continuous speech may, at times, become monotonous to the audience, but with the questions inserted at appropriate intervals the lecturer may be attempting to focus students' attention to the key issues on the lecture. In this excerpt the important issues are also counted *two things* and then the theory is linked to practice, which should allow at least those students who have worked at a paper mill to relate the theory to the practical problems in the mill.

The following passage (53) shows how questions are used as a focusing tool and the one we are most interested in at this time is the parallel question.

(53) L: /…/ and now you can see once again this figure and what it told you when we talk about effluent qualities of water effluent quality and which which factor affects which quality of course when we talk about generally there is first there is a process type *what is the temperature of the process is it low or high temperature* raw materials are *what is this raw material you put in process* you can guess what is the effluent quality when you when you have for example pulping process you can find all those compounds which you can find from wood and as you know /…/

AL21

This lecturer also uses questions to list the important issues regarding the factors influencing water effluent quality. First a wh-question *what is the temperature of the process* and immediately a parallel question *is it low or high temperature* and yet another

wh-question *what is this raw material you put in process*. The lecturer may have realized that the audience may think the temperature has to be known exactly when what he meant is the importance of knowing whether temperature is high or low, not the temperature in exact degrees. This, again, relates the theory to practice and gives the students tools on how to estimate different things when working within the process industry.

The last example of the content-oriented focusing questions is a yes/no question (54) below.

(54) L1: /…/ now i would like to add one which is not known that much normally and which is that wood is the only construction erm only relevant construction material which is renewable there's no other er construction material which is renewable which means that it grows or *have you seen steel trees or concrete* you just can't and this is one of the general characteristics which is not known that much so what happens is that by by environmental or renewable aspect wood is by four erm by far quite good /…/

AL17

Here the lecturer uses a delightfully ridiculous image in order to enable his audience to remember one of the great aspects of wood as a material. it is easy to think of the audience imagining a steel or a concrete tree and through that image the key point of this passage is easily recalled when necessary.

Organizing

These questions form a small category (N=22) and they all are present in the challenging lectures. Since there are only wh-questions, two examples of similar kind are listed below as Examples (55) and (56). These excerpts are from the same lecture, as this was the only lecturer who used these questions. As mentioned above, the lecturers' personal style may influence the type of questions they use when lecturing.

(55) L1: /…/ and normally we would like to increase viscosity level and causing also change in the pressure pressure loss, and *how we can do it with these polymers*, this is more or less nice to know information i don't actually need to give this more, we need to look first at the consequences and then i will come back to describe things more in detail /…/

CL05

The lecturer poses a question on polymers and as soon as he does this, points out that it is not one of the essentials and moves to another topic. In this case the question can be seen as the boundary from which the focus is on another issue. Perhaps this question is used as a teaser for the students to find out more about the polymers and their effect on the viscosity level even if it is only *nice to know* information. It may also be possible that as the lecturer mentions *polymers* he realizes the polymer route would take him too far from where he is supposed to go and thus he makes another turn and starts to look at the consequences first.

The following excerpt shows metalanguage used prior to the questions.

(56) now we will move on to the next point which is the immobilized, immobilized layer so this filter cake part, and *how to effect and what the factors are actually causing these effects to the liquid penetration and the pressure drop*, from our materials we know that we have different types of pigments we have isometric, so these blocking ones, like calcium carbonate or we have rod-like and plate-like kaolin plates as an example, so they they are different from their nature

CL05

First the lecturer points out that they are about to move to the following point and then lists the issues that will be discussed. After the listed questions, the topic is *pigments* which may at first seem far from the *liquid penetration* and the *pressure drop* and with this contrast the lecturer may have thought to stimulate students' thought into wondering how *pigments* are related to *liquid penetration* and the *pressure drop*. Naturally, as the lecture proceeds, this issue becomes quite clear, but these questions and the topic change after them can be seen as an audience activating feature in this lecture. Despite these efforts on the lecturer's part, this lecture was one of the challenging ones.

6.4 Summary

The mere glance at the question quantities in the present data indicates the importance of interactional features, such as questions, in lectures. The accessible lectures contained 196 questions in total while the challenging lectures had 78 of them.

When the questions were analyzed in more detail, the division between content-oriented (i.e. rhetorical) and audience-oriented questions provided further information. The accessible lectures contained more instances of audience-oriented questions (N=169) while only 27 of the content-oriented questions. Students initiated 15 of the audience-oriented questions in accessible lectures. The situation was the complete opposite for the challenging lectures, which contained only 40 audience-oriented questions and 38 content-oriented questions. When the student initiated questions (N=19) are deducted from the audience-oriented questions in challenging lectures, we see that lecturers asked 21 audience-oriented questions in those lectures. These results indicate that the use of audience-oriented questions in particular improves lecture comprehensibility.

7 Repetition and its Interactive Potential

This chapter reviews the third interactional feature under investigation in the present study. Repetition is a fairly difficult feature to both determine and to categorize, but at the same time it is extremely intriguing due to its multifaceted character and functions.

7.1 Repetition in General

Repetition is present in our environments on many levels. If we think of almost anything in nature, we notice repetition. Even bird songs are repeated time after time and all patterns in nature contain repetition (Harris, 1931). Since it is so prevalent, humans are conditioned to notice and pay attention to repetition.

Repetition in discourse has been identified by some scholars as a sign of dysfluent, hesitant, and even defective language use (Biber et al., 1999; Scollon and Scollon, 2001) while others (Goffman, 1974; Halliday and Hasan, 1976; Tannen, 1989; Hoey, 1991) see it as an important, cohesive element in speech.

The functions of repetition, as the above-listed studies indicate, are diverse and it manifests itself in a variety of forms which can be found in all genres. Repetition is also present in rituals (e.g. religious sermons, court proceedings, service counters), arts (e.g. plays, poetry, lyrics), and in everyday conversations. Johnstone wonders: "Are there in fact only two things we can do in discourse, either repeat or do something different?" (1994: 19).

Repetition is present in all texts and its form and functions are varied. Aitchison (1994: 16) lists 27 terms which explicate how repetition is most often used. These terms depend on who is repeating and why and they include, for example, the following: "chiming, cohesion, copying, doubling, echolalia, imitation, iteration, parallelism, parroting".

Repetition, especially in conversation, has been studied extensively. It is seen as a cohesive device which indicates involvement in conversation (Hoey, 1991; Tannen, 1989; Persson, 1974). Tanskanen (2006) studied repetition in both written and spoken discourse and found

that it is most present in two-party conversations while it hardly manifests itself in academic writing at all.

Another dichotomy related to repetition is its intentionality. Mauranen (2006) speaks of ”involuntary” repetition, which is sub-classified as repeats and self-repairs. Repeats include repetition of a single item, such as repeating one word *and*, *and*, *and*… while what is known as self-repair is a type of rephrasing *ok that's very. that's a right answer*.... ”Deliberate” repetition, which, according to Biber et al. (1999: 1056) may be used for emphasis and clarity, differs from repeats and self-repairs as it is presumably used more intentionally.

Repetition can also be immediate when an item is repeated close to its first occurrence in speech or delayed when there is some intervening material between the repeated items. An example of a delayed repetition is a (multi-party) conversation where someone wants to change the topic and someone else keeps returning to the previous topic (Aitchison, 1994).

According to Tannen (1989), repetition may occur as self-repetition and repetition of others, also referred to as allo-repetition. The form in which repetition occurs can be viewed as a continuum with exact repetition of individual items or chunks at one end and paraphrase or reformulation as well as what Tannen refers to as “repetition with variation” at the other end.

Persson (1974) classifies repetition into lexical repetition used for intensity, emphasis, imitation, and purposive reasons like the Example (57) below exemplifies.

(57) /…/ and the equilibrium the *moisture content* the exact *moisture content* of that piece /…/

AL15

In this example the repetition is there for emphasis, which is accentuated by the word *exact* preceding the repetition. Syntactic repetition, according to Persson, includes exact repetition of a syntactic unit or use of parallel constructions (58) while thematic repetition includes paraphrasing, repetition with variation, reverse paraphrase, and rewording (59).

(58) /…/ *there will be* er *alkaline effluent* and *there will be acidic effluent* and the neutral water /…/

AL21

(59) /…/ which is actually *attaching these two layers with each other* and that's called *adhesion*

CL05

The parallel construction *there will be* in Example (58) is repeated together with the repetition of two different *effluents*, which can be seen as lexical repetition despite the change of the modifier from *alkaline* to *acidic*. Example (59) shows paraphrasing, which is indicated by *that's called* before introducing the word *adhesion*. In the present study the need for Persson's (ibid.) fine-grained categories, especially in the thematic repetition, are not seen beneficial.

Repetition in conversation has also been investigated by Norrick (1987). While his findings are extensive, the main functions of self-repetition include floor-holding, gaining planning time, enhancing coherence, and increasing comprehension. The main functions for repetition of others vary from showing interest, agreement, or disagreement to paying attention. Although these categories are not directly related to the present study, it was important to explore also conversational repetition in order to formulate a well-rounded picture on repetition.

Similar to Norrick's (ibid.) categories is Bazzanella's (1993: 290-291) exhaustive taxonomy of repetition, which lists cognitive, textual, stylistic, argumentative, conversational, interactional, and ethnic devices as the macro functions of repetition. This taxonomy was also constructed in relation to conversation, as the name of her study "Dialogic repetition" indicates.

Repetition in ELF situations has also been investigated and it is seen both as a means to ensure comprehension and as a signal of misunderstanding (Mauranen, 2006; Watterson, 2008). According to both Mauranen and Watterson, repetition is more overtly present in situations where the discourse participants need to ensure comprehension and this requires both self and allo-repetition in its various forms. Mauranen's (2012) explorations indicate

that, though content-oriented, ELF speech also includes repetition for various communicative purposes. Furthermore, Mauranen found no differences when she compared the way repetitions were used by native and non-native speakers of English in academic settings (2006). Although not focusing on repetition in their study, Cogo and Dewey (2006) mention repetition as one of the accommodating strategies which is used in ELF conversations.

7.2 Repetition in Educational Settings

Repetition in education can be used to indicate to the audience the important, salient parts of a lecture, and simultaneously to provide the audience cognitive support for processing perhaps quite complex issues. In addition to these rhetorical and cognitive functions, repetition can also be used as a controlling device either to direct the classroom discussion where the teacher expects it go or to actually gain control of the classroom situation (Johnstone, 1994).

Other-repetition is also prominent in classroom situations. Sinclair and Coulthard's (1975) Initiation, Response, Feedback (IRF) model has also been used to analyze repetition. Usually the teacher initiates the exchange, students respond and the teacher provides feedback on the response. According to Hellerman (2003), if the teacher feedback is a repetition of the students' response, it can be viewed as an evaluation of that response. Sinclair and Coulthard (1975) indicate that the possibilities for feedback from the teacher include acceptance, rejection, evaluation, or comment. I suggest that, especially in academia, the repetition of students' responses can also be seen as co-operation and setting a common ground, thus diminishing the power distance between the lecturer and students. This is essential when viewing lectures' function of socializing students into academia (see Section 2.1).

To examine lectures and repetition in them, studies have focused mainly on the dialogical parts of the lectures (e.g. Bamford, 2000). Bamford's study on economics lectures identified four categories of repetition: (1) simple repetition, (2) thematic repetition, (3) parallelism, iconicity and listing, and (4) contrastive repetition. The first category includes

items or chunks which are repeated verbatim, the second pertains to those instances where themes previously mentioned are repeated in a lecture, the third one is used for clarity and effect and the fourth one allows highlighting the contrasted items through repetition. In other words, in educational settings, rhetorical and cognitive functions of repetition are seen as critical. Mauranen (2009) has also pointed out that repetitions play a rhetorical role in lectures. I argue that, despite its monologic appearance, language use in lectures is also interactive and, therefore, repetition, which can be viewed more as an interactional device, should be investigated as well.

7.3 Repetition in Technology Lectures

We have established that there are many issues to consider when investigating repetition: whether we are looking at exact, lexical repetition, or a repeat of the same idea in different words, is the repetition immediate or delayed, is repetition of self or other, and other such questions. In this section we need to establish what functions repetitions have in discourse.

The dichotomy of *unintentional – intentional* is the first, very broad classification to be used for the present data. *Unintentional* repetition in the present study includes *repeats* and *reformulations*. Unintentional repetition as a term is not self-evident, as it is quite difficult to measure speakers' intentions. Unintentional repetition is seen to relate to the real-time processing of language where repeats and reformulations are common. In its most basic form, it occurs through slips of tongue, gap-filling, and perseveration (*the, the, the*). With reformulations this study refers to those instances which in other studies are also called self-repairs, re-starts, and self-corrections. Here they are included in the unintentional category, which is not seen to occur randomly like in some other studies (e.g. Kjellmer, 2008), but as a feature which influences both interactivity and intelligibility of speech. Despite their perceived unintentionality, repeats and reformulations also hold interactional value as turn holding devices or as devices to avoid silence or gain thinking time (Tannen, 1989; Biber et al., 1999). Likewise, the intentionality of *intentional* repetition cannot be measured, but the differences between unintentional and intentional repetition are quite

clear. The subcategories of *intentional* repetition were developed based on several models, which will be discussed below.

Bamford's (2000) categories described above of simple, parallel, thematic, and contrastive repetition, which she used when investigating repetition in economics lectures, were the preliminary model to analyze intentional repetition in the present data. However, in the early stages of analysis, it became evident that these categories were not completely suitable. Persson's (1974) model was already determined to have too refined subcategories, but a look at the main categories of lexical, syntactic, and thematic repetition proved useful. The model used in the present study for intentional repetition was combined from Bamford's and Persson's models with some modifications as an illustrated overview of the categories in Figure 7.1 below depicts.

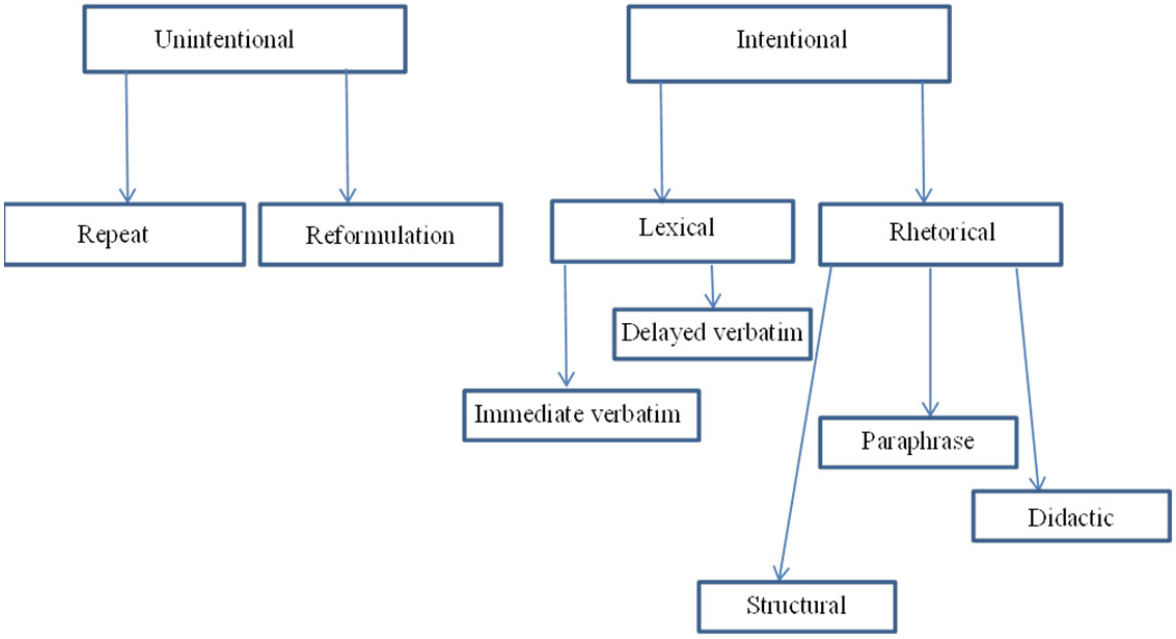

Figure 7.1 Repetition Categories

Since many studies (e.g. Tannen, 1989; Persson, 1974; Bazzanella, 1993) speak of delayed repetition and immediate repetition, this aspect was taken under examination in lexical repetition, which is the most pervasive category in the present study. It was also deemed necessary to identify rhetorical repetition in contrast with lexical repetition. Persson and

Bamford both call this thematic repetition, but here this type of repetition was seen as a rhetorical device, hence the term rhetorical repetition. Rhetorical repetition includes paraphrase as well as structural and didactic repetition. This last category relates to repetition of others' speech, which seemed central in the data and is supported by Sinclair and Coulthard's (1975) IRF model. Repeating interlocutors' speech in a didactic manner is typical classroom talk, the feedback (F)-part of this model, which increases involvement through co-operation, affirmation, or correction.

Table 7.1 provides an overview of the repetition categories used in this study with their functions and definitions. The categories will be discussed in further detail through specimens below. The example numbers pertaining to the categories in this table are listed for easier reference to more detailed examples of these categories.

Table 7.1 Repetition Categories, Functions, and Definitions

Unintentional	Function	Definition
Repeats (RR)	hesitation/turn-holding/ avoiding silence/gaining processing time	Repeat of a single grammatical item: e.g. *it, it, it* (60)
Reformulations (RS)	reformulation/ re-start/ rephrasing/gaining processing time	Revision of the original utterance: e.g. in the *net, internet* i'll put (61)
Deliberate		
Lexical (RL)	explicating and emphasizing	Verbatim repeat of a lexical item: e.g. with the *base paper*, so this is the *base paper* coating color interaction.
Immediate (RLI)	explicating and emphasizing	lexical item is repeated immediately with no or few intervening words (62)
Delayed (RLD)	explicating and emphasizing	Some intervening material (max. 20 items) between the first and the second occurrence of the repeated lexical item. (62)
Rhetorical (RH)	Rhetorical, cohesive, explication, emphasis, and topic development purposes	Lexical items or chunks are repeated through paraphrase, lists, or parallel, iconic, and contrastive constructions.
Paraphrase (RHP)	Rhetorical, cohesive, explication, emphasis, and topic development purposes	Same concept is repeated using different words, usually identified by *it means that*, *which is actually*, *we also call them*, *meaning that* or some other phrase, which indicates the following is a paraphrase. (63)
Structural (RHS)	Rhetorical, cohesive, explication, emphasis, and topic development purposes	Repetition occurs through parallel and iconic constructions as well as through lists. (64), (66), (67)
Didactic (RD)	Other-repetition to mark co-operation/affirmation/ agreement/attention/ involvement/participation	Lecturer repeats (usually verbatim) what the audience has uttered. (68)

Although the functions of these categories overlap, having different categories was deemed necessary as repetition, though its function may be the same or similar, manifests itself in various ways. This also provides more information on the use of repetition in lectures.

Unintentional repetition includes the cases of repeats and reformulations. Repeats are a common feature in spoken language and in conversations they are used as a floor-holding device while during lectures they can be seen as a silence-avoiding device. Despite their authority on floor, lecturers seem uncomfortable with silence and when they are seeking for the right word or thinking of how to formulate what they are about to say, they revert to repeats as the Example (60) below depicts.

(60) /…/ i think you're familiar with, *that that* wood is a hydroscopic material and it means that wood *can, can* take in /…/

AL15

The other type of repetition which is grouped in unintentional repetitions is reformulation. Reformulations function closely in the same manner as repeats, but the speaker stops the utterance already started and changes it into something different. Example (61) below shows a typical reformulation.

(61) /…/ if the temperature in the system is close to the *latest last* transition temperature /…/

CL05

When we look at the intentional repetitions, there are the clear cases of lexical repetition. Some scholars (Tannen, 1989; Kim et al., 2001) recognize that lexical repetition is either immediate or delayed. Since these, according to Kim et al. (2001), influence cognitive processing and, thus, may have an influence on how students perceive lectures, the immediate and delayed lexical repetition were examined as their own categories. Specimens of these are provided below in Example (62).

(62) /…/ it will be very easy to use the *binders* in the base paper which causes then a layer near the surface which is formed of this *binder* so *binder* concentration varies a lot in this way there is a little risk of peak /…/

CL05

The first occurrence of *binder* is in plural, but the lexical items are viewed as a lexical repetition of the lemmas, regardless of their form. After the first time this item is uttered, there are seventeen intervening words and then *binder* is repeated in singular with an immediate, third repetition. This third occurrence is viewed as an immediate repetition despite the intervening word *so*. These repetitions show a topic development through repetition. Consequently, lexical repetition is not seen dependent on singularity/plurality and it is viewed as immediate when only one to five intervening words separate the occurrences of the repeated item (see Kim et al., 2001).

Drawing a line on what is discerned as delayed repetition proved quite challenging. Since the topics discussed during lecture typically included three to four main ones which were supported by subtopics, the same lexical items were repeated in the delayed manner several times. From examining the transcripts, a limit of twenty intervening words was seen as appropriate when defining the frame of delayed repetition. Immediate repetition, at times, also included one or two intervening words.

Lexical repetition, whether immediate or delayed, is fairly simple to identify. The subcategories of rhetorical repetition: paraphrase, structural and didactic repetition required somewhat more manual procedure in locating them, which is discussed below.

In order to include only clear cases of paraphrasing in this category, those identified through *it means that*, *which is actually*, *meaning that* and similar constructions between the repeated item and the paraphrase (63) were seen to belong to this category.

(63) /…/ wood is a *hydroscopic material* and *it means that* wood can, *can take in water and give out water dependent on on the moist, the relative humidity around that one piece of wood* /…/

AL15

Structural repetition includes listing, iconic repetition, (*more and more)*, contrasting and parallel structures.

Example (64) shows how listing is used as structural repetition.

(64) /…/ the reason's that natural water contains *different kind of particles different kind of organic material inorganic material and colloidal material* /…/

AL21

Locating lists, such as these, was done through a manual search of the transcripts. The frequency-based key word listing (see Chapter 3) was helpful in the search as these lists often related to the explication or expansion of the main topics discussed in lectures.

Iconic repetition is a commonly used emphatic device. The way it is used in lectures is depicted in Example (65)

(65) /…/ why this value is *very, very* important to know is that since fibers have a certain charge density /…/

CL19

Contrastive repetition, as can be expected, juxtaposes something within the repetition. Possibly the most known contrastive repetition is President John F. Kennedy's *ask not what your country can do for you - ask what you can do for your country*. Example (66) below shows how contrastive repetition manifests itself in lectures.

(66) /…/ fiber surface is *not a flat it's not a smooth* this way but it is like *there are fibrils* /…/

CL19

Connective words, such as *but*, *instead*, *or,* and *however* were used to help locate contrastive repetition

Parallel constructions use parallel syntax and may also repeat certain words within those constructions. These cases were close to lexical repetition, but rather than repeating a lexical item, repeated specific constructions. This placed them in the parallel repetition category as exemplified by Example (67) below.

(67) /…/*we have* very heavy excess of polyanions *we have* a soluble complexes where *you have* an excess of polycations *we again have* soluble complexes but at certain area *we have* to erm phase separation /…/

CL19

Here the construction *we have* is repeated while listing the items which are included in this process. The repetitive rhetorical structure is emphasized through the use of *again* during the third instance while the intervening *you have* is used almost like a contrastive repetition discussed above in Example (66). The last *we have* is connected to *phase separation*, but the lecturer attempts to continue with an infinitive, which is indicated by *to* and, after hesitation continues with a noun phrase after all.

The last subgroup of rhetorical repetitions is called didactic repetition as it is typical for classroom talk. Lexical repetition of others does also occur in everyday dialogues, but the classroom talk differs in many ways from a regular dialogue as discussed above. This type of classroom talk naturally is present only in those lectures with dialogical phases in them. Example (68) exhibits didactic repetition.

(68) L: /…/ coniferous trees consist of three parts what three parts, lignin
S3: cellulose
L: *cellulose*
S5: hemicellulose
L: and *hemicellulose* what do they want to get rid of when they when they make pulp
S3: lignin
L: *lignin* and there are two left /…/

AL17

The above listed features were the focus of analysis at this stage. First the lecture transcripts were searched for the most typical repeats of *and, but, or, in, of,* and *to*. Three word clusters were also extracted and then the transcripts were manually searched for repetitions (see Chapter 3). Frequency word lists were also helpful in determining the main topics of

each lecture as discussed in Chapter 3. When locating rhetorical repetition, it was useful to consult the key wordlist to find those words which were frequent in the lecture. Naturally, the most frequent words were function words, which is why the word lists were generated on words containing five letters or more to find content words in the transcripts. These lists provided information on word frequencies, which was used in locating repetition. Table 7.2 below shows an example of word lists from three different lectures. The words are in the order of frequency in each lecture.

Table 7.2 Frequency Word Lists on Three Lectures

N	AL21	CL02	CL19
1	water	there	polyelectrolytes
2	there	because	these
3	about	about	polyelectrolyte
4	because	these	water
5	those	chemical	charge
6	course	different	different
7	however	something	cationic
8	effluent	possible	actually
9	different	tracheids	anionic
10	after	working	because
11	process	inside	about
12	sludge	mechanical	there
13	material	modification	system
14	understand	people	course
15	which	think	paper
16	chemical	treatment	solution
17	precipitation	academic	polymers
18	first	first	example
19	particles	toxics	meaning
20	problems	chemicals	molecular
21	example	fibers	retention
22	organic	finnish	interactions
23	processes	gender	polymer
24	remove	native	therefore
25	system	resistance	weight
26	evaporation	softwood	between
27	methods	speaker	often
28	quality	status	flocculation
29	colloidal	toxic	means
30	mechanical	after	other
31	nowadays	compression	soluble
32	treatment	hardwood	absorption
33	waste	other	degree
34	energy	water	increases
35	remember	birch	phase
36	sludges	important	which
37	solid	instance	complexes
38	alkaline	little	density
39	amount	material	important
40	impurities	process	particles

This list of frequent words was used when manually searching for rhetorical repetition as well as for lexical repetition.

The repetition categories were defined above. Based on this categorization, the instances of repetitions located are presented in Table 7.3. A more detailed analysis of each category follows the quantitative presentation of the repetition instances.

Table 7.3 Quantities of Repetition in Lectures

		Repetition types							
	Lecture	RR	RS	RL	RH	RHS	RHP	RHD	Totals
Challenging	CL02	14	2	37 I 1	9	8 IC 2	0	1	62
	CL05	23	4	63 I 0	12	9 IC 3	3	0	102
	CL19	81	33	10 I 1	25	18 IC 6	7	0	149
Totals		118	39	110	46	35	10	1	313
Accessible	AL17	64	4	101 I 4	62	6 IC 0	6	50	231
	AL15	46	45	84 I 0	37	29 IC 0	8	0	212
	AL21	65	20	79 I 1	35	21 IC 3	2	12	199
Totals		175	69	264	134	56	16	62	642

Note: RR=Repeats, RS=Reformulations, RL=Lexical repetition, RH=Rhetorical repetition (includes RHS, RHP, and RHD), RHS=Structural repetition RHP=Paraphrase, RHD=Didactic repetition, I=Immediate repetition, IC=Iconic repetition

The quantity of total repetition in challenging lectures is approximately half of that in accessible lectures (315/642). All of the overall figures in accessible lectures are higher, which supports my original observation on the first round of analysis that the interactional features, such as repetition, indeed distinguished these two types of lectures.

The most common repetition is the lexical one while paraphrases are the least common. Looking at repetition quantities in individual lectures, the number of repetitions increases as we move from the challenging to accessible lectures.

When analyzing the intentional repetition, a similar trend to the total repetition is seen regarding the number of repetitions. A curiosity concerning rhetorical repetition (RH) is the more pronounced presence of iconic repetition (IC), e.g. *very, very*, in the challenging lectures than in the accessible ones.

Paraphrase in most cases showed larger quantities in the accessible lectures. Lecture CL19 of the challenging lectures is approaching the accessible ones, which agrees with the student perceptions: on the comprehension scale illustrated in Chapter 3, lecture CL19 is towards the middle ground between challenging and accessible lectures. This further supports the relevance of this feature in my analysis. Nevertheless, both ends of the scale are low in paraphrase instance: CL02 has none and AL21 has two of them. When examining the total number of paraphrase in challenging vs. accessible lectures, it is the most equally distributed type of repetition with 10 instances in challenging lectures and 16 in the accessible ones. This is mostly due to the larger quantity of paraphrases in CL19 and the small number of them in AL21.

Naturally those lectures which had no or little dialogue had either no or little didactic repetition (RD). Lecture AL17, since it had the most didactic elicitation (see Chapter 6), which encourages student participation, also contained the most didactic repetition.

When examining unintentional repetition, the amount of repeats (RR) varies in a way that requires attention: two of the challenging lectures show a very low amount of repeats while the rest of the lectures have a considerable number of them. Reformulation (RS) behaves in almost the same way with one exception: lecturer 17, one of the accessible ones, does not use self-repairs particularly much, but if we count the unintentional repetitions, i.e. the repeats and reformulations together, the quantities are almost linear with the scale from challenging to accessible lectures as seen in Table 7.4 below.

Table 7.4 Quantities of Unintentional Repetitions in Lectures

	Lecture	Repeats	Reformulations	Totals
Challenging	CL02	14	2	16
	CL05	23	4	27
	CL19	81	33	114
Accessible	AL17	64	4	68
	AL15	46	45	91
	AL21	65	20	85
	Totals	293	108	401

Lectures CL19 and AL17 are so close to the middle ground that the amount of repeats has as if changed places when comparing to all the other lectures. This most likely relates to the idiosyncrasies of these lecturers. Since both of them are close to the middle ground of the challenging/accessible continuum, this feature alone was not the determining one in students' perceptions.

It is interesting to see how a phenomenon which is thought to be a signal of dysfluency (Biber et al. 1999) may influence students' perception of lectures in a positive way. Fox Tree (2001) claims that there are communicative dysfluencies, and dysfluencies which interfere with communication. Freed (1995) found that fluent speech has more repairs and other of these so-called dysfluent features than speech which was not perceived as fluent (1995:138-139).

How, then, can fluency be defined? Freed (1995) refers to her personal communication with Sajavaara in 1994 regarding his observation: "fluency is ultimately in the ear of the listener" (1995:143). In an attempt to determine fluency in a more explicit way, it can be seen as a continuum, as illustrated in Figure 7.2 below.

Figure 7.2 Fluency Continuum

This continuum is based on Wennerstrom's (2000) study on prosody and how it influences the perception of fluency, as well as on Freed's (1995) investigation on fluency of students' language. Because the perception of fluency is subjective, it is worth noting that in all but one (Itkonen, 2010) of the studies I found on fluency, those determining speakers' fluency were NSs, regardless of the language which was being evaluated. Therefore even this continuum could be argued to be too NS oriented. Nevertheless, studies on ELF fluency so far (Prodromou, 2008; Huettner, 2009) have not provided these types of definitions for fluency. Prodromou focuses on the use of idioms, whether modeled after NSs or coined by ELF users, as a sign of fluency while Huettner examines fluency through dialogic perspective and calls for reconceptualization of fluency by further, detailed studies on ELF.

Itkonen's (2010) study on how NNSs evaluators assess high-school students' spoken English indicates that fluency is one of the most difficult criterion to define and, at the same time, to assess. Regardless of these difficulties, it tends to be one of the evaluated aspects in spoken language assessments.

Although unintentional repetition is viewed as a feature of dysfluency by many researchers, in the present study it is examined as part of speech and, as Clark and Fox Tree (2002) suggest, as part of the message and not as interference. Naturally occurring speech contains such features and, since the lectures in the present study are mostly conversational or even participatory (see Section 2.1.2), it is natural that they also contain repeats and reformulations.

Mauranen (2006) found that repeats were more frequent in ELFA corpus than in MICASE. This may be a useful feature: while the lecturer is searching for the right word or expression

and gaining time for it through repeats, the audience is, at the same time, given more time to process what is being said (Mauranen 2006:118-119). Brennan and Schober (2001) also suspect that the delay in speech may improve comprehension in discourse which contains hesitations, repeats, and reformulations.

7.3.1 Unintentional Repetition in More Detail

Repeats (RR)

As mentioned above, repeats are often seen as dysfluencies. However, there is also evidence that they may be important not only for the speaker but also for the audience in giving time for processing the uttered issues. In the present study, repeats were prevalent in the accessible lectures while almost non-existent in two of the challenging lectures. The way repeats are used does not differ depending on the lectures. Example (69) below shows how repeats gain processing time:

(69) /…/ a real piece of wood it might be so that some of the, *in*, *in* the other end *of the*, *of the* piece *the, the the*, we are in the fiber saturation point /…/
AL15

The lecturer has been discussing water in wood cells and how the fiber saturation point is dependent on relative humidity and then proceeds to give an example. It appears the sample is thought of while speaking and the speech has to be slowed down in order to formulate the thought into an expressible chunk. In this excerpt, despite the pauses, fluency is not hindered by the use of repeats, but speech appears natural. In dialogue these types of repeats and pauses are quite common (Tannen, 1989; Linell, 1998; Clark and Fox Tree, 2002). Lectures in the present study are mostly conversational and participatory, which warrants the presence of the conversational features in them.

At times, though, we can see how repeats may interfere with fluent delivery as in Example (70) below.

(70) /…/ more to these <GETTING ANOTHER TRANSPARENCY> late tracheids are *in erm in this this* direction they are living because they are storing erm *what what* wood would need for living erm here erm <FINNISH> no, siis ravinteet </FINNISH> /…/

CL02

The lecturer is attempting to find the correct term for *ravinteet* 'nutrients' but for some reason cannot remember what it is in English and finally resorts to Finnish in order to obtain the right word either from the audience or a colleague who was present during the lecture. Here, due to the pausing, several repeats, and hesitations, the audience may lose the point of the lecture when they start to think of the requested word in English. Those students who do not speak Finnish may be even more confused as they cannot follow what is being said at the end of this passage.

Reformulations (RS)

In the present study the term reformulation is used for those unintentional repetitions which are sometimes called self-repairs. This feature is common in speech and may or may not include a modification of the initial utterance. According to Levelt (1983), there are three phases to a self-repair: original utterance, editing phase, and the repair proper (Levelt 1983:44). Example (70) shows manifestation of reformulation.

(70) /…/ having higher vapor pressure in the layer we should have bigger porosity at certain part where we have mostly the *evapo, evaporation* taking place /…/

CL05

We see that the speaker is starting to say *evapo* and then hesitates for a reason unknown to his audience before re-starting and repeating the same word he first started to say.

The following excerpts show those types of self-repair where actual reformulation (or repair) is taking place. In Example (71), some information is added, in (72), the original word or start of a word is changed, and in (73), the complete form of the utterance is changed.

(71) /…/ at least we had aspen here you can see aspen they're the ha in hardwood the moisture co , average moisture content is around /…/

AL15

(72) /…/ when we talk about the pulp mill about eighty percent of total amount of effluent are from pul er bleaching and you remember that there are both er er alkaline and acid effluent /…/

AL21

(73) /…/ we have a chain of monomers connected to each other and if it's like, if we have, like, if all the monomers are, are, of same origin we call that system

CL19

While repeats were quite similar in both challenging and accessible lectures, reformulations seem to differ in them not only in quantity. In the examples above, (71) and (72) lecturers either add information for more detail *average moisture content* rather than simply *moisture content* or correct it *bleaching* rather than *pulping*, which aids the audience to follow the speech. In (71) there is also a case of form modification as the lecturer first starts to say *the ha* and then changes it to *in hardwood the*, which only slightly slows the speech, but cannot be determined to be a sign of dysfluency, as discussed above. In (73) the lecturer seems to be searching for the right words and, therefore, the syntax is influenced by this. This is an example of clusters of dysfluencies, which is seen as a feature of not fluent speech (see Figure 7.2).

However, these unintentional repetitions are a natural part of especially spontaneous speech and the results in this study indicate that they should not be avoided or seen as dysfluencies when they are not clustered or otherwise used in a manner which leads to perception of not fluent speech (see Figure 7.2).

7.3.2 Intentional Repetition in More Detail

As shown in Figure 7.1, intentional repetition includes *lexical* (RL) and *rhetorical* (RH) repetition. Rhetorical repetition is subdivided into *structural* (RHS), *paraphrase* (RHP), and *didactic* (RHD) repetition. Speakers use it as a cohesive device to help listeners with the clarity of their message, as well as a rhetorical device to emphasize, intensify, and stress

parallelisms and correlations. Listeners use repetition as a support for memory and comprehension (see Bazzanella 1993, 2011).

Lexical Repetition (RL)

Lexical, verbatim repetition refers to those cases when single words or chunks of words are repeated either immediately or, most commonly, somewhat delayed. There were no differences in the manner of lexical repetition use between the accessible and the challenging lectures, but in two of the challenging lectures, CL19 and CL02, the quantity of lexical repetition was lower than in the other lectures.

Examples (74) and (75) indicate how lexical repetition is used in this data.

(74) /…/ liquid phase in the coating color when it becomes in contact with the *base paper*, so this is the *base paper* coating color interaction. and meaning that if the coating cannot hold the water in it it is flowing inside the *base paper* and when we discuss about the *base paper* we know that if the water is moistening the *base paper* it is weaker to last /…/

CL05

The term *base paper* is repeated several times just in this passage and, since it is an important term regarding the topic at hand, it is repeated 34 times during this lecture. In the key word list, it is the third most common content word used in this lecture. The only ones above it are *water* and *coating*.

(75) /…/ and then this *chemical modification*, wood is *impregnated* with some chemical it reacts with wood substance or not there's quite big differences if it's react or not because if it's not react the water can take it up. i think that next tuesday we have i talk more carefully about this *chemical modification* now i will give you some ideas. we have to know the aim what what why we are doing something and here is this *dimension stability* and *decay resistance* termite resistance fire resistance or something else mostly what we have done is for this *dimension stability* and *decay resistance* too next *chemicals* what we can use <CHANGING TRANSPARENCY> are so-called PEG polyethene glycol furic acid <SIC> malev </SIC> acid and glycerol acting in acetylation of wood you can acetylate with many different anhydric and acetic anhydric like this one but <SIGHS> that what is harmful with these *chemicals* is that that many of them are very toxics and that's why it's not possible to use them, i have to say that anymore because on sixties we use it very gene generally <P:6> and then we have to use a wood

that is possible to be *impregnate* if we have one instance that is this spruce there is no no way possible to use any *chemical* /…/

CL02

This passage is quite long, but it is included here in order to show a case of a more problematic use of lexical repetition. There are several cases of delayed lexical repetition (*chemical modification, chemical, dimension stability,* and *decay resistance*). What is of specific interest in this passage, nevertheless, is *impregnated/impregnate*, one of which appears at the top of the passage and the other towards the end of it. This type of delayed repetition, which actually has more intervening items than in the cases I consider as delayed repetition, was not very common in this data. Most of the time terminology was repeated in the same manner as in Example (74), immediately or with few intervening items and several times consecutively. Since the delayed repetition shown above in Example (75) is present in one of the challenging lectures, it raises even more interest. The lecturer in this excerpt seems to digress from the overall topic of wood impregnation by introducing a few other concepts, which, though they are related to wood impregnation, may cause confusion in the audience. It is different for us as we read through the transcript, but hearing this type of text with many different terminology words may be overwhelming. To remember these different terms while attempting to comprehend how they relate to each other, requires a lot from the audience especially in this case, when the original concept of *impregnation* is returned to after quite a long stretch of discussion about other issues.

Rhetorical Repetition (RH)

Rhetorical repetition covers those cases of repetition which use repetition as a rhetorical device: to emphasize, intensify, as well as to stress parallelisms and correlations. Rhetorical repetition is sub-grouped into *structural, paraphrase,* and *didactic* repetition.

Structural Repetition (RHS)

Structural repetition manifests itself through parallelism, lists, and iconic repetition. Parallelism (Example 76) is in question when syntactically parallel forms are used in repetition. Lists (Example 77) are similar to parallelism, but include more than two items.

Iconic repetition (Example 78) includes those cases, where an emphasizer is repeated (Bamford, 2000). These are exemplified below.

(76) /…/ different prope properties this is this way this way and then with this way too so *different directions different properties* so let's say that different /…/

AL17

(77) /…/ are recycled as you can see there are many kind of er water what we use in in in bleaching *there is alkaline one there is neutral one* and *there is acidic one* and as you can see /…/

AL21

(78) /…/ we need to measure these things and actually we are lucky to have a *very very* simple arrangement for this and one one of the best ones is developed in åbo academy university it's called /…/

CL05

This type of *structural repetition*, which Bamford (2000) called *grammatical repetition*, according to her, is used for clarity and effect which both can be seen in the excerpts above. In (76) the parallel construction of *different directions different properties* underlines how the difference in direction influences the properties. It can be assumed this type of construction would help with comprehension and memorization. Listing in Example (77) has a similar effect while the iconic repetition of *very, very*, which is a common emphasizer, in Example (78) highlights the simplicity of the procedure the lecturer is introducing to the students.

Paraphrase (RHP)

Paraphrase, as mentioned above, is identified by *it means that*, *which is actually*, *we also call them*, *meaning that*, or other similar phrase indicating that the following will be a rephrase of the previous utterance. The following Examples, (79) and (80) below, show paraphrase in both challenging and accessible lectures.

(79) we do not get anchoring this kind of interfacial layer, *which is actually* attaching these two layers with each other and *that's called adhesion*

CL05

(80) so it's it's just there. but what does bound water mean *bound water means* that it is the, the water molecules are bound to the polymers in the cell wall with hydrogen bonds

AL15

In Example (79), the paraphrase is reversed from the way it is usually structured. Persson (1974) calls this *reverse paraphrase* and categorizes it in thematic repetition. Although, when we look at these different ways of paraphrasing, they may seem quite similar, the *reverse paraphrase* may increase the audience's cognitive load since there are many items to remember before the actual concept is mentioned. The more common way of paraphrasing is that the lecturer mentions a concept and then explains in other words what is meant by it. Here the explanation comes first: *which is actually attaching these two layers with each other* and then the term *adhesion*.

When looking at Example (80), there are several helpful devices for the audience: first there is a rhetorical question *what does bound water mean*, after which the lecturer responds to the question first by using the same syntax as was used in the question *bound water means that* and only then explaining what it means. A repeat of *the, the* is also present, which may provide more processing time for the audience. The rhetorical question first points out to the audience that there is something important coming, then the term is repeated twice and explained with a paraphrase after a slight hesitation.

These two different ways of using paraphrase indicate that not only the presence of paraphrases or other features discussed in this study but also the way they are used is of importance for making the lectures more accessible.

Didactic Repetition (RD)

Didactic repetition can be present in those lectures with dialogue. Didactic repetition of other is similar to Sinclair and Coulthard's (1975) IRF model's F, i.e. the feedback part of this model. Lecturers' repetition of students' responses is defined as didactic repetition. The other aspect of didactic repetition is discussed in Chapter 6 as didactic elicitation. The lectures where didactic repetition is present are L02, L17, L15, and L21. The last three are accessible lectures while L02 is a challenging lecture. When searching through these

lectures for didactic repetition, L02 had only one case of it and it is provided in Example (81) below.

(81) L1: /…/ they are living because they are storing erm what what wood would need for living erm here erm <FINNISH> no, siis ravinteet </FINNISH>
S1: nutrients
L1: *nutrients*. yes <GAZING AT THE AUDIENCE>
CL02

This passage was discussed already above in Example (70) for repeats in it. Now we go further in the lecture and a student responds to the lecturer's Finnish part by translating the word the lecturer was searching for. After the student's response, the lecturer repeats the word *nutrients*. The repetition here is like a sigh of relief after searching and searching for the word and not being able to get your brain to co-operate. Luckily the audience was more willing to co-operate and, therefore, this repetition can be seen as a rather collaborative exchange.

Extract (82) shows more typical didactic repetition with affirmation followed by either another question or a gaze at the audience for more responses.

(82) L: /…/ so this ratio <WRITING ON A FLAP BOARD> strength per density of wood is much better than than for example steel which is much better than concrete however there are some better materials than wood can you mention any <GAZING AT THE AUDIENCE>. with this measurement so strength per density and we could put that which is pretty close to weight
S2: glass fiber
L: *glass fiber* where would we use glass fiber <GAZING AT THE AUDIENCE>. where do we use it
S2: boats
L: *boats* very good do you like boating.
S2: i do yeah
L: *yeah* very good what else
S2: aluminum
L: *aluminum*, what are where do we use composites today. for what. these are in transportation industry particularly in
S2: roofs
L: yeah and, erm, <GAZING AT THE AUDIENCE> let's put that this way er who came by plane to finland raise your hand <GAZING AT THE AUDIENCE> okay, you've been using them a lot
S3: yes

L: because all airplanes are full of composites and they are full of things where this strength per density /…/

AL17

This passage has many interesting features regarding didactic repetition. First the lecturer gazes at his audience after asking a question indicating that a reply is expected. After a response, he affirms it by repeating *glass fiber* and asks another question right after that and, since he does not get a response to that immediately, repeats the question and, thus, uses didactic elicitation (see Chapter 6). When a response is offered, the lecturer moves from a dialogue with the entire audience to a dialogue with the student who just responded to his question. When that student answers to the lecturer's question on whether he likes boating with *yeah*, the lecturer repeats even this *yeah* and after that adds *very good* and asks another question. In a sense this could be seen as an evaluation of the student's response, while whether the student likes boating or not is quite irrelevant and, therefore the evaluation would seem like an unnecessary digression, but nice and encouraging. Since the dialogue has been focused to this one student, the student keeps responding. When the student in question responds an unexpected *roofs*, which is a correct reply to where aluminum is used, but not the reply the lecturer was looking for, the lecturer does not repeat the word, but affirms the correctness of the reply with *yeah* and continues to give more information in order to get the answer he was expecting. Since no one jumps in to offer it, the lecturer involves the whole group and, at the same time providing the answer he was looking for, by asking for a raise of hands of those who arrived in Finland by plane. After this, it is easier to have another student answer his following question by simply choosing one of the students who had raised their hands in response to the question *who came by plane to Finland*.

7.4 Summary

We have seen that repetition is used in many ways in lectures, both unintentionally and intentionally. Unintentional repeats tend to provide time to think and as a way to avoid uncomfortable silence rather than as floor-keeping devices, since in this setting the lecturer naturally holds the floor and may even have to encourage students to respond even to direct

questions. The intentional repetitions were further classified into sub-groups to be able to see their functions. Some lecturers have more of a narrator in them and also use repetition in that way, while most use repetition to organize or to clarify various points.

The differences in the use of repetition in the challenging and accessible lectures were seen through the quantities, as the amount of repetition in accessible lectures was approximately twice of that in the challenging ones. Since the accessible lectures also contained more unintentional repetition, this seems to carry an important role in comprehension. This, most likely, is related to unintentional repetition providing time not only for the speaker but also for the audience.

The number of two of the subgroups of intentional repetition was notably higher in the accessible lectures. Lexical repetition was far more common in the accessible lectures (264) than in the challenging ones (110). Didactic repetition, a subgroup of rhetorical repetition was the most intriguing: only one instance in one challenging lecture while 62 instances in the accessible lectures. Nevertheless, one of the accessible lectures contained no instances of didactic repetition.

Paraphrase had the least difference in the quantities when comparing accessible and challenging lectures. The amounts in both lecture types is fairly low, 10 in the challenging and 16 in the accessible. This may relate to the lecture genre, since typically there are a few main topics which are discussed during the lecture and these topics include terminology which needs to be explained. Paraphrase is a good way to do this.

Furthermore, the manner in which the intentional repetition is used in challenging and accessible lectures differed somewhat as shown through Examples (79) and (80) and this, may also influence the way these lectures were perceived by the students. The presence of didactic repetition almost solely in the accessible lectures (with a single instance in the challenging ones) would indicate that this type of typical classroom interaction is useful in lectures as well.

It is evident that repetition is not only a cohesive device in lectures, but it is also used as an interactive feature and to help students grasp the main points of the lectures.

8 Comparison with Finnish Lectures and Summary of Findings

This chapter first examines the findings from Finnish lectures and then summarizes all the findings to provide a bigger picture of them.

8.1 Finnish Lectures and Interaction

Considering the students' apprehension about lecturers' English and how there would not be as much interaction in ELF lectures, as well as several studies (e.g. Klaassen, 2001; Airey, 2009; Hellekjaer, 2010) which indicate that NS lectures, i.e. those lectures conducted in students' native language, include more interaction in them, I was delighted to be able to record two of the lecturers investigated above lecturing in Finnish. This section shows the results of these recordings, which were first transcribed in the similar manner as the ELF lectures above.

The lectures are identified as L02F (ELF lecture CL02) and L21F (ELF lecture AL21). The analysis focuses on the quantities of the interactional features, since within the scope of this study, it would not be feasible to analyze the Finnish interactional features in the same detail as the ELF lectures were analyzed.

8.1.1 Control Acts in Finnish Lectures

When the quantities of control acts in Finnish lectures are compared to those in ELF lectures, we can see that the quantities of the control acts overall are quite low. The only exception is directives, which are present in L21F approximately half as much as in AL21. The quantities of control acts in Finnish vs. ELF lectures are shown in Table 8.1 below.

Table 8.1 Control Act Comparison in Finnish vs. ELF Lectures

	Control acts in Finnish		Control acts in ELF	
	L02F	L21F	CL02	AL21
DD	1	9	0	17
DIR	0	0	0	1
DIA	1	2	0	0
DINC	0	1	1	1
DIMP	3	0	0	1
Totals	5	12	1	20

Note: DD=Directive, DIR=Request, DIA=Advice, DINC=Inclusive, DIMP=Impersonal

When looking at the total quantities of directives, the difference between L02F and CL02 is in accordance with the earlier studies on EMI. However, when we look at L21F and AL21 totals, the situation is the opposite: AL21, the ELF lecture, contains almost twice the number of directives when compared to L21F.

Giving advice (DIA) is something both of the lecturers do in Finnish, but not in English. These lecturers use it in a similar manner as shown in Examples (83) and (84) below.

(83) /…/ teidän ei oikeastaan tarvi tietää viel tässä vaiheessa kunhan tiedätte että on olemassa /…/

L21F

['you really don't need to know about this right now as long as you know that it exists']

(84) /…/ olkaa siis aina, aina tarkkana sillon ja kannattaa vähän tutustuu miten se toimii /…/

L02F

['be always, always careful then and it is worth familiarizing yourselves how it works']

These passages provide guidance to the students and could also be seen as a way to increase audience involvement, since the advice is addressed to the audience quite directly.

8.1.2 Questions in Finnish Lectures

Of all the lecturers, AL21 used questions to a considerable degree in his ELF lecture (see Table 6.4) and had the second largest number of them in the examined lectures. CL02 had the third lowest number of them in his lecture. Table 8.2 shows the amount of questions also used in Finnish lectures.

Table 8.2 Question Comparison in Finnish vs. ELF Lectures

	Questions in Finnish		Questions in ELF	
	L02F	L21F	CL02	AL21
QAI	9	2	2	13
QAIS	4	0	18	3
QAD	7	0	0	52
QAO	5	0	3	1
QCF	5	22	1	12
QCO	0	6	0	0
Totals	30	30	24	81

Note: QAI=Information seeking/checking, QAIS=Information seeking/checking by students, QAD=Didactic elicitation, QAO=Invitation to pose a question, QCF=Focusing, QCO=Organizing

It is interesting to see how the number of questions in both of the Finnish lectures is the same when the number of questions in ELF lectures is radically different. CL02 with 24 questions uses fewer questions in ELF lecture while the number of questions in AL21 is a little over three times that at 81. It is fascinating to see how differently these lecturers operate from each other. AL21 is also very different depending on the language he uses and, according to the students' perceptions on ELF lectures, his ELF lectures probably are perceived as more comprehensible than his Finnish lectures.

Mauranen's (2006) study on signaling and preventing misunderstanding supports the way AL21 lectures in ELF: he is aware of the potential comprehension problems and attempts to ensure those problems are avoided or noticed by communicating with his audience. Therefore, though there are not that many dialogical phases in this lecture, the conversational style (see Section 2.1.2) of AL21 ELF lecture makes even his monologue more dialogical. This may ease the cognitive load on the audience and they perceive the lecture as comprehensible.

8.1.3 Repetition in Finnish Lectures

When we examine repetition in Finnish vs. ELF lectures, the situation is similar for both lecturers: they both use far less repetition in Finnish lectures than in ELF lectures. This is noteworthy, since L02F has been using more interactional features in his Finnish lecture, but now the situation is different. The number of repeats and lexical repetition show the largest differences when we look at them in Table 8.3 below.

Table 8.3 Repetition Comparison in Finnish vs. ELF Lectures

	Repetition in Finnish		Repetition in ELF	
	L02F	L21F	CL02	AL21
RR	4	56	14	65
RS	5	43	2	20
RL	0	2	37	79
RH	1	7	9	35
RHS	0	3	8	21
RHP	1	4	0	2
RHD	0	0	1	12
Totals	6	105	62	199

Note: RR=Repeats, RS=Reformulations, RL=Lexical repetition, RH=Rhetorical repetition (includes RHS, RHP, and RHD), RHS=Structural repetition
RHP=Paraphrase, RHD=Didactic repetition

Lexical repetition may relate to the large number of terminology repetition in the ELF lecture while repeats may be due to gaining processing time while searching for words in English. Nevertheless, when we look at the number of repeats in L21F and AL21, the difference is not that large (56/65). The number of reformulations, though, is twice as high in L21F than in AL21. The number of lexical repetitions in AL21 is also high and didactic repetition in AL21 is 12 while non-existent in L21F.

For some reason, both lecturers behave in a similar manner regarding repetition in ELF lectures. This, again, most likely relates to the attempts to avoid misunderstandings and the wish to make the lecture as comprehensible as possible. Why is the same tactics not used in Finnish lectures? Perhaps when the lecturers speak their native language which they know is also the audience's native language, they may feel it is unnecessary to use repetition as

much. The audience, though, may not agree with this, since new terminology in any language takes time to learn and comprehend.

8.2 Summary of Findings

In order to obtain a thick description of the EMI Master's Program, it was considered necessary to gather information from an outside source, namely the survey among Finnish Paper Association Engineers. The survey on working life English showed that paper engineers use English mostly with NNSs of English, at least daily or weekly, and with few problems. The number of problems with NNSs was lower in proportion when compared to the number of problems with NSs. When problems occurred, the respondents felt that the interlocutor's poor comprehension or speech were the main reasons for the problems. This finding agrees with that of Stotesbury (2009).

Likewise, students' perception of the EMI Master's Program was positive with lecture comprehension values well in the upper quartile of the scale. Lecturers' English was evaluated mostly as either excellent or good, and as being better than students' own English. The NS lecturer was also seen as desirable. However, after the NS lecture students felt that they would have understood the lecture better in their own native language. This was not the case after ELF lectures.

In an attempt not to repeat myself too much, but to provide a summary of the main findings, a table of the overall quantitative results on interactional features is provided below. Table 8.4 contains the total numbers of the investigated features, both in ELF lectures and in Finnish lectures.

Table 8.4 Interactional Feature totals in Lectures

	Lecture	Control Acts	Questions	Repetition	Totals
Challenging	CL02	2	24	62	88
	CL05	22	47	102	171
	CL19	10	7	149	166
	Totals	34	78	313	425
Accessible	AL17	24	105	231	360
	AL15	28	8	212	248
	AL21	21	81	199	301
	Totals	73	194	642	909
Finnish	L02F	5	30	6	41
	L21F	12	30	105	147
	Totals	17	60	111	188

The totals within lectures as well as the totals of interactional features indicate that the quantities of interactional features in a lecture correlate with students' perception of their comprehension. To illustrate this, Table 8.5 below compares these two side by side.

Table 8.5 Comparison of Comprehension Value with Interactional Features

	Lecture Number	Comprehension value	Number of Interactional Features
CHALLENGING	06	15.50	
	20	16.00	
	CL02	16.11	88
	08	16.67	
	CL05	16.70	171
	CL19	16.73	166
	10	16.78	
ACCESSIBLE	12	16.88	
	AL17	16.89	360
	07	17.00	
	AL15	17.08	248
	16	17.38	
	09	17.43	
	22	17.47	
	01	17.50	
	13	17.50	
	18	17.91	
	AL21	18.05	301
	11	18.75	
	03	18.78	
	04	18.78	
	14	19.25	

The fact that the lectures, based on the number of their interactional features, would be categorized in the same main categories of challenging and accessible indicates that students' perception and their comprehension values correlate with the number of the interactional features.

In Section 2.1.2, the lecturing style categories were determined. Now that we have investigated these lectures thoroughly, the lecturing style continuum for these lectures can be developed based on the number of interactional features in lectures. Table 8.6 below shows how lectures are categorized according to their styles.

Table 8.6 Lecture Styles and Interactional Features

Lecture number	Number of Interactional Features	Lecturing style
Cl02	88	Conversational/Participatory?
CL19	166	Rhetorical/Reading aloud
CL05	171	Rhetorical
AL15	248	Conversational
AL21	301	Participatory
AL17	360	Participatory

Arranging the lectures according to the number of interactional features in them changes their order somewhat, but not much. The accessible lectures remain in their end of the continuum and the challenging ones in theirs. Within these two categories some switching occurs.

It is easy to define lectures AL21 and AL17 as *participatory*, since they contain the most didactic elicitation and dialogical phases. Lecture AL15 can be called conversational based on the number of interactional features. I could not find any of these lectures as being *reading aloud*, though CL19 approached it: there was no real contact with the audience and no opportunities were provided for the students to ask questions or interrupt the lecturer. CL02 defies categorizing. Although there were not that many interactional features in the lecture, there were dialogical phases and even collaboration with students helping the lecturer with English and explaining issues to their fellow students. But since the starting point in this study was students' perception of the lectures, CL02 is defined as a challenging lecture with a combination of styles.

When examining the total numbers of interactional features in these different lectures, it becomes evident that their use is far more frequent in the accessible lectures. The totals listed in the table are not comparable as such, since there are only two Finnish lectures and three of each type of the other lectures. However, when we divide the total number of interactional features in each type of lectures by the number of lectures in those types, we should obtain an average number for interactional features, which is more comparable. The result is that the Finnish lectures, in average, contained 94 interactional features. The challenging lectures included 141 and the accessible lectured included an average of 303

interactional features. Since students' perceptions indicated which ones were accessible lectures, the presence of interactional features must have influenced on how students perceived these lectures.

9 Discussion and Conclusions

The aim of this study was to shed light on an EMI Master's Program, the linguistic features in its lectures, and how they match with students' perceptions of them. The present study attempted to find differences and/or similarities between linguistic features in the explored lectures. Furthermore, it aspired to find a connection between students' perception of the lectures and the use/non-use of the specific linguistic features. Finally, it compared the same lecturers' ELF lecture and native language (NL) lecture for the linguistic features.

The major finding of the present study is that the use of interactional features in lectures influences the way students perceive them, while the perceived quality of lecturer's English does not correlate with students' perception of them.

Figure 9.1 depicts these findings.

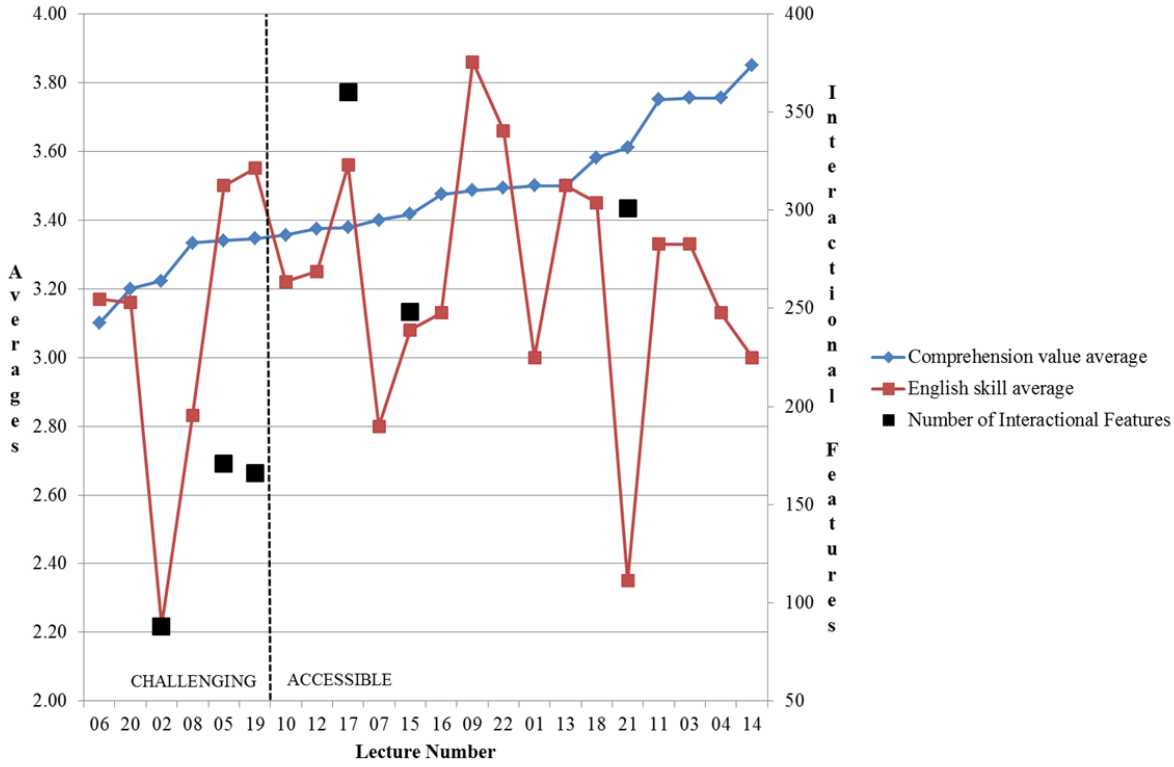

Figure 9.1 An Overview of the General Findings

This figure depicts how the English skill average calculated from students' evaluations has no specific trend while, since the lectures were in their order of comprehension value averages, the lecture curve ascends. The points for the numbers of interactional features are from the transcribed lectures and the difference between the challenging and the accessible lectures is quite striking. The outlier embedded cases, Lectures C02 and A21, are notably lower in their English skill averages, but, as discussed above, at the opposite ends of the comprehension value averages. Therefore, the interactional features can be seen as devices which assist the audience with comprehension.

What makes this finding reliable and, therefore, also valuable is the methodological approach through which this was discovered. In addition to this, contrary to earlier studies (Klaassen, 2001; Kaur, 2009; Airey, 2009; Hellekjaer, 2010), this study shows that interaction in NL lectures occurs far less than in all but one ELF lecture.

In this chapter I will discuss the findings of the present study and summarize the main conclusions based on the presented results, and then suggest directions for further research. The discussion is organized through the research questions presented in Section 3.4.2. These questions also relate to the phasal approach applied in this study. Due to its descriptive nature, as well as the case study method, no hypotheses were provided. Naturally, I had some expectations, and views on what may influence students' perception. In order to allow the research to be data driven and not be biased by my preconceptions, I tried to remain as neutral as I could. A set of propositions was compiled based on previous studies. These propositions were the following:

- Lecturer's English interferes with lecturing/comprehension.
- English is used daily or weekly with mostly NNSs of English in anticipated working life of the students.
- Comprehension is influenced by identifiable linguistic features.

Further details on the propositions for this case study are listed in Table 3.1 in Section 3.1. Although not hypotheses, these propositions are the prior notions on the research topic and they were used in the design of the study.

9.1 Discussion on Findings

This study has many parts to it and this may result in a somewhat fragmented image of the results. Since the goal was to obtain a holistic understanding on an EMI Master's Program, all these parts were seen as necessary. They are like the pieces of a puzzle and, at the moment we are ready to put these pieces together to see what the picture looks like.

The findings will be discussed in a phasal, spiral like order, i.e. in the order I conducted the study. This should allow the reader to be able to acquire the pieces of the puzzle in a similar manner I obtained them when working through this study. This should also enable discussion of each phase.

9.1.1 How is English used in the working life of (paper) engineers?

This question was posed to determine what requirements await the students after they graduate from the EMI Master's Program. For this purpose, an on-line survey was conducted among the Finnish Paper Engineers' Association members on their English use (see Sections 3.1 and 4.1). Although the response rate was quite low, as it usually is for on-line questionnaires, the responses provided valuable information.

The main findings from this survey show that most of the respondents use English daily or at least weekly and mostly with NNSs of English. Despite this, problem situations occur quite rarely (see Mauranen, 2006). These findings support the use of EMI, since it prepares the students for their future working lives, especially when the instruction and other studies are conducted in ELF.

The respondents also felt that the most important reason behind these problem situations is their interlocutors' poor spoken skills. This is quite an interesting finding and it may be connected with Finnish (all the respondents were Finnish, see Section 3.1) education where the model of English is the native speaker. Since the NS model is currently also used in education elsewhere and it may especially influence the way people react to pronunciation (see Jenkins, 2007).

Despite the useful information gathered through this survey, it could have been conducted differently. In order to obtain information on all former graduates, the survey could have been conducted among the alumni. Another option would have been to contact all the other associations related to FBI (Forest Based Industries). Nevertheless, the strength and image of the Finnish Paper Engineers' Association as an integral part of the forest products and paper business justified the survey being conducted among its members. Had the purpose of this survey been more central to this study, another approach would have been selected, such as the alumni survey.

9.1.2 How do the student performance results differ between the Master's Program in Finnish and EMI Master's Program?

Although student performance cannot be seen as a direct result of their comprehension of lectures or even as a successfully organized Master's Program, students' course results provide some information on their studies. Since universities commonly use these types of results as indicators of teachers' or the whole academic community's performance, the student performance results between the Finnish Master's Program and EMI Master's Program were compared (see Sections 3.2 and 8.1).

At first, due to the major changes in the university course structure at the same time the change in the instruction language took place, this comparison seemed impossible. After investigating the courses and course contents, ten similar courses in the Finnish program (in the academic year 2001-2001) and in the EMI program (in the academic year 2006-2007) were identified. Students' course grades in these ten courses were compared and the results were almost identical in slight favor of the EMI program with a few more students passing the courses.

Another way to study student performance would have required the use of methods applied in several comprehension studies (see Section 3.2). This was not possible, since the performance of the first group in 2001-2002 was only available in course grades. If comparing two groups within the same time frame, measuring comprehension through various tests (multiple-choice, cloze, gap-filling) or by asking students to identify the main

points of the lecture could be used. Even these, though, would not provide completely reliable results on comprehension (see Sections 2.1.2 and 2.3.1).

To be able to compare the two different programs which were running at two different times, student performance comparison was seen as the most feasible way to obtain comparable information. We must, nevertheless, also remember that students in these two programs were different and, therefore, an exact comparison is impossible.

9.1.3 How does students' perception of lectures differ throughout the EMI Master's Program?

The major findings through student questionnaire included how students, in general, evaluated the lecturers' English as better than their own and that the lectures could be organized in the order of comprehension based on students' responses.

The paper-based student questionnaire which students filled out after having attended one of the ELF lectures provided the student perception on these lectures. Students evaluated lecturers' English (as well as their own), responded to the questionnaire statements, and gave feedback in the space provided.

In order to maintain the respondents' anonymity, the questionnaires remained unidentifiable. It would have been interesting to see how a specific student perceived the different lectures. A numbering system for identification was considered, but was determined too complex and with too many possibilities for human error. The response rate may also have been smaller and the responses may have been affected, had the respondents been identifiable.

In order to obtain more pronounced differences in the comprehension values, more detailed questions related to comprehension may have resulted in clearer differences in these values. However, in order to get students to respond to the questionnaires immediately after the lecture and at least somewhat reliably, it was important to keep the length of the questionnaire at two pages at the most.

The questionnaire results were used in categorizing the lectures into challenging and accessible. This provided a good basis for seeking to explain why some lectures seemed to work better than others. In order to examine the lectures more thoroughly, three accessible and three challenging lectures were selected and transcribed. The selection criteria are discussed in detail in Section 3.2.3.

9.1.4 What are the differences in the use of linguistic features when comparing challenging and accessible lectures?

The lectures were organized into two categories, challenging and accessible, according to student perceptions of them. In order to locate those linguistic features, the transcripts of the so-called outlier unit lectures were examined and compared. When listening to the recordings and reading through the transcripts, the presence of questions in the most accessible lecture and the lack of them in the most challenging lecture was noticed. Based on this, first all the transcribed lectures were investigated for questions in them. Since the number of questions was related to the lecture comprehension value, a search for other interactional features was conducted. The results which emerged from this preliminary investigation indicated that the interactional features were the linguistic features worth examining more thoroughly. Although each lecturer used visuals somewhat differently, they all had some type of visuals. These included over-head projector sheets, PowerPoint slides, blackboard, whiteboard, and flap board. Some lecturers used on-line videos while others handed out samples. Therefore, three interactional features (control acts, questions, and repetition) were chosen as the focus of the linguistic analysis of this study.

The results show that the accessible lectures have slightly over twice as many interactional features as the challenging ones (see Table 8.4). This indicates that the use of interactional features supports their accessibility.

When the lectures are organized in the order based on the number of interactional features in them, the main categories remain the same, but some movement within the categories occurs (see Table 8.5). Therefore, the cut-off point between the challenging and accessible lectures also seems to have been determined correctly (see Section 3.2.3).

9.1.5 How are interactional features used in ELF lectures?

Investigating interactional features in more detail provided further information on their use. When looking at the total number of the different interactional features (control acts, questions, and repetition) in the transcribed lectures, the accessible lectures have more or less twice the number of each of these features. However, there are differences between lectures within these categories, as shown in Table 8.4. Although accessible, AL15 had only eight questions in total while a challenging lecture CL05 had 47.

The use of one interactional feature over the other appears to depend on the speaker's idiosyncrasies and, in the case of AL15, the use of repetition and control acts was higher than in any of the challenging lectures, which also resulted in a higher total number of interactional features despite the slight use of questions in AL15.

The most central interactional feature which showed to be most central in accounting for differences between the challenging and accessible lectures was questions and especially didactic elicitation. The total number of questions in challenging lectures was 78 while it was 194 in the accessible lectures.

Repetitions were also interesting. The accessible lectures contained 641 repetitions (including all types) while challenging lectures had 313 of them. Both didactic elicitation in questions and didactic repetition were hardly seen in challenging lectures while they were very pronounced in two of the accessible lectures (AL17 and AL21).

Control Acts

Control acts were used for class management (see Reppen, 2008) mostly for general issues. Control acts were also expressed in connection with mental verbs which made them almost as traffic signals for students: they indicate which parts of the topic at hand are the most important and which ones belong to the "nice to know" category. The directivity of these control acts is often mitigated by the use of inclusive *we* as the use of directives may seem too patronizing in the university setting.

The accessible lectures contained little less than twice the number of control acts in challenging lectures. The most pronounced type was the *directive* (35 in accessible lectures and 12 in challenging), which agrees with previous study on university language (Biber, 2006).

The other control act categories are fairly small, only the inclusive control act (*we + verb)* had more marked presence (13 in accessible and 7 in challenging lectures). This is interesting, since this structure is used for establishing a common ground and to soften the control act. Control acts in general add audience involvement and, therefore, may heighten the feeling of collectiveness and the students belonging to the scientific community.

Questions

Questions were classified into the following categories as shown in Table 9.1 below.

Table 9.1 Question Categories (repetition of Table 6.2)

Audience-oriented
- Information seeking/checking posed by the lecturer (QAI)
- Information seeking/checking posed by a student (QAIS)
- Didactic elicitation (QAD)
- Invitation (QAO)

Content-oriented
- Focusing (QCF)
- Organizing (QCO)

Questions were used rhetorically (*content oriented*) as well as to obtain a response from the audience (*audience oriented*). Despite this division, audience oriented questions also seemed to be used for rhetorical purposes. For example, even *didactic elicitation*, which is similar to display questions used by teachers most often to display students' knowledge, was used for emphasis and to invoke audience interest. *Didactic elicitation* was the most pronounced type of questions and it was used 114 times in the accessible lectures and 8 times in the challenging ones. The use of didactic elicitation was lecturer-dependent: only AL21 (52 times), AL17 (62 times), and CL05 (8 times) used it. In general, AL21 and AL17

asked the most questions of all and they also asked information seeking/checking questions, which the other lecturers used only once or twice.

Invitation is another curious question type. These are the questions where the lecturer invites the audience to pose questions, which on the surface would seem to enhance interaction. Nevertheless, this was the only question type more present in the challenging lectures (9) than in the accessible ones (2). This may relate to the way this question tends to be used: to signal transition from the discussed topic to the following one rather than to invite students' questions in earnest (see Chapter 6).

A notable trait in the most challenging lecture was the number of student-posed questions. This indicates that students are actively involved in lectures and will voice their concerns if they feel there is a problem. Despite the questions and responses to them, students' perception of this lecture was not favorable. Could the student questions have made the situation seem confusing or are the students just trying their best to try to make sense of the situation? A closer look at the students' questions and the situations in which they occur should provide an answer to these questions, but this is beyond the scope of the present study.

Repetition

Repetition was categorized into *intentional* and *unintentional repetition*. Unintentional repetition includes repeats (*and, and, and*) as well as reformulations (close to the *latest last* transition). Intentional repetition is divided further into two categories, lexical and rhetorical, which both have subcategories (see Chapter 7).

Similarly to other interactional features, repetition was also more common in accessible lectures: slightly over one and a half as many instances of repetition in accessible lectures. Lexical repetition was the most common type (264 in accessible lectures, 118 in the challenging ones), though repeats were also prevalent (175 in accessible lectures, 110 in the challenging ones).

The large number of *repeats* would indicate that their purpose in speech is meaningful: they provide processing time for both the speaker and the listener and thus help with comprehension. Repeats are often viewed as an undesirable part of spoken language (Biber et al., 1999; Scollon and Scollon, 2001); however, they should actually be seen as a useful tool and should not be avoided, at least when speaking of something which requires a lot of processing (Mauranen, 2006, 2012).

Lexical repetition was used in connection with the discussed topic and in several cases the same lexical item was repeated many times in a fairly short passage. This most likely indicates to the audience that this must be important since it is repeated so many times. It also helps in retaining the potentially new or at least fairly new vocabulary students are exposed to in lectures.

Didactic repetition, since it is connected to dialogue, was present only in those lectures with dialogue (AL21, AL17, CL02).

9.1.6 Are there differences when comparing lectures by the same persons in English and in Finnish?

Since there has been quite a lot of discussion and studies on EMI and how it may limit students' ability to learn and comprehend, I eagerly took the chance to record two lecturers lecturing in their native language, Finnish. I already had captured these lecturers in the earlier part of my study and they were in my focus groups of challenging and accessible lectures.

At least students' opinion (Pynnönen, 2005) suggests that when lecturers lecture in their native language, they are able to provide more examples and there is more interaction during the lectures, which both are seen as beneficial for the audience. This provided me with a chance to see whether this was the case with these two lecturers or not.

To my surprise, this was not the case in the lectures I recorded at all: the lectures held in Finnish used interactional features to a very minimum and even dialogue was completely missing. Since dialogue was present in most of the examined ELF-lectures in the present

study, this study does not support the notion that the use of native language would increase interaction and contradicts (Airey, 2009) findings on the number of questions in native language vs. English.

Unfortunately, since the opportunity to record the Finnish lectures was provided quite suddenly, there was not much time to prepare for it. Had I thought about it more thoroughly, I would have prepared a Finnish questionnaire similar to the one in English I used in ELF lectures in order to obtain students' perceptions on the Finnish lectures, as well. It is generally assumed that students comprehend their native language lectures naturally, but it could and should be investigated.

9.1.7 The Main Methodological Findings

The investigation process during this study has been extremely interesting. It was evident from the very beginning that there were, though not very large, specific differences in students' perceptions of the examined lectures. These perceptions provided a starting point for shedding light on their differences.

The case study approach together with the phases involved in this exploratory investigation enabled me to obtain a multi-angled approach on this Master's Program as well as to conduct a more thorough analysis on the chosen embedded cases which filled in the picture from within the lectures.

The lecture situation may have been influenced by my presence in the audience with my video recorder and notes. Some of the lecturers commented on having been more nervous than usually when they knew I was there. Since the lecturers were informed of my presence before the lecture, this may have influenced their way of lecturing. This, though, is quite unlikely when considering the busy schedules these professionals have. They all were, however, in the same situation and the data collection was identical yet the differences were still found.

Despite my expectation that overt dialogue is not necessarily needed for interaction, this study shows that at least in two lectures it worked well. However, one of the lectures with

dialogue, despite it or because of it, was perceived as challenging by the students. This calls for research into the relationship between overt dialogue and the inherent dialogicality of monologue.

9.2 Conclusions

The findings related to the propositions (see Table 3.1 in Section 3.1) indicate that the English degree programs seem to correspond to students' future working life requirements and that ELF use does not pose problems in either the working life or the lectures. When student performance was compared in the Finnish Master's Program and the EMI Master's Program the results were virtually identical, which also indicates that ELF use is not problematic in this Master's Program.

Students' evaluations of lectures first clearly indicated that the lectures were perceived differently and when the linguistic features in the lectures were examined through transcripts, the presence or lack of interactional features was related to the lecture comprehension values. Therefore, it is evident that the use of interactional features influences the way in which students perceive lectures.

Furthermore, the use of interactional features in lectures would seem to benefit the audience and their perception of the lectures. Contrary to earlier studies (e.g. Airey, 2009; Hellekjaer, 2010), interaction and especially overt dialogue was nearly nonexistent in Finnish lectures when compared to ELF lectures held by the same lecturers.

9.3 Further Research

Since interaction can also be realized through other linguistic means, it would be of interest to investigate other features in the present data. One of the features which has already tempted me has been the use of inclusive *we*, which appears to have several functions from mitigation with directives to establishing common ground in other contexts.

Furthermore, though each lecturer used some type of visuals, it would be worth exploring the amount of deictic references in these lectures to see whether there are differences

between these in the challenging and the accessible lectures. When following these lectures while recording them and making field notes, for me it was easier to follow those lectures where the lecturer did not have everything completely ready on a slide, but drew or wrote on a board. This, in addition to deictic material, could be worth examining.

In addition to investigating interaction, also other linguistic features in the present data would be of interest. A more corpus linguistic approach to quantify various features on the present data and its comparison to Biber's (2006) study on university language may be intriguing.

A longitudinal study on a few students and their perceptions of a master's program or, similarly, a study on few lecturers and their use of ELF would be of interest, as well. Furthermore, an investigation on NL lectures would unfold useful information: are NL lectures comprehended as easily as is thought? Due to the small amount of interactional features in the Finnish lectures I recorded, it would be worth exploring.

A comparative study on the student perceptions between Finnish students and international students would provide another aspect to the present data. This would grant us a notion on whether Finnish students are more critical of Finnish lecturers using English or do they find their common language background helpful. Similarly, the international students could have, already during their Bachelor level studies, become more familiar with ELF use in lectures.

Investigating lectures and their benefit in general would be more of a pedagogical study. Bamford (2000: 148) suggests that since lectures are used universally there must be a benefit to them over reading the same material in the books. In my opinion, firstly, lectures should not only be composed of the material found in books, but should – an usually do – include practical examples, explanations and further elements not available in books. Secondly, these are not the only two options, especially today with current technology. Furthermore, lectures already include more interaction than reading a book; therefore, contrasting them seems imbalanced.

9.4 Pedagogical Implications

This study is a report on findings regarding an EMI Master's Program. Originally I was asked to evaluate the lecturers' English skills, but due to the reasons discussed throughout this study, the task evolved into a case study with several phases and levels. The evaluation of lecturers' English skills was actually completed by the students while I recorded both the evaluations and the lectures. My view on lecturers' English is a holistic picture compiled from all aspects of the present study.

All recorded lecturers had a high level of English skills. They are also the experts within their complex fields of study and have years of experience, many both in academia as well as in industry. Despite this, there were differences in how students perceived their lectures. The use of interactional features as well as overt interaction in lectures was shown to be beneficial. Since the presence of repeats and other hesitations was higher in the accessible lectures, the more conversational style lecturing was perceived as more accessible by the students. These issues should be pointed out in university pedagogical training, other coaching, and even university teachers' guides.

Another aspect about lectures and comprehension worth mentioning is how spontaneous spoken language is easier for the audience to comprehend than written text read aloud (Chafe, 2006). Despite the fact that spoken language is used far more than written text and although Halliday's (1989, 1985) ideas on the complexities of spoken language are not new, it is often still viewed as inferior to written text. Even the terminology used in relation to spoken language features seems to be negative (e.g. dysfluency, dislocation, repairs, self-correction, hesitation). All these features are a normal part of spoken language and without them it would be far more difficult to understand. These features help with processing and with cognitive load and, therefore, especially the highly demanding topics discussed in engineering lectures should be kept as spontaneous as possible. The results in the present study are an indication of this as well (see Table 8.6).

Lecturers should also understand the special requirements of ELF: their audience is linguistically heterogeneous, which sets further demands on their English. Although able to

successfully present topics within their demanding fields of study, some lecturers may benefit from ELF training, which would make them aware of the uniqueness of these lectures and indicate the usefulness of interaction.

Since we are talking about lecturers whose field of expertise is not English, being aware of ELF and the research on it could also enhance the lecturers' view on their own language skills. The NS model may unnecessarily make the NNS lecturers feel insecure and inferior when lecturing in English (see Jenkins, 2007) and the findings that the NS lecture in the present study was not found the most accessible could resolve some of the insecurities regarding the use of English.

Bibliography

Adler, M., 1977. *Pidgins, Creoles and Lingua Francas*. Hamburg: Buske Verlag.

Airey, J., 2009. *Science, Language and Literacy*. Uppsala: Uppsala University.

Airey, J. and Linder, C., 2008. Bilingual scientific literacy? The use of English in Swedish university science courses. *Nordic Journal of English Studies 7*, pp.145-161.

Aitchison, J., 1994. Say, Say It Again Sam. In A. Fischer, ed. *Repetition*. Tübingen: Gunter Nair Verlag. pp.15-34.

Athanasiadou, A., 1991. The discourse function of questions. *Pragmatics*, 1(1), pp.107-122.

Bakhtin, M., 1986. The Problem of Speech Genres. In C. Emerson and M. Holquist, eds. *Speech Genres and Other Late Essays*. Austin: University of Texas Press. pp.60-102.

Bamford, J., 2000. Question/Answer sequencing in academic lectures. In M. Coulthard, ed. *Working with dialogue*. Tübingen: Niemeyer. pp.159-170.

Bamford, J., 2000. *You Can Say That Again: Repetition in Discourse*. Bologna: Clueb.

Bamford, J., 2005. Interactivity in Academic Lectures: The Role of Questions and Answers. In J. Bamford and M. Bondi, eds. *Dialogue within Discourse Communities: Metadiscoursive Perspecives on Academic Genres*. Tubingen: Niemeyer. pp.123-145.

Bassey, M., 1999. *Case Study Research in Educational Settings*. Maidenhead: Open University Press.

Baxter, P. and Jack, S., 2008. Qualitative case study methodology: study design and implementation for novice researchers. *The Qualitative Report*, 13(4), pp.544-559. Available at: http://www.nova.edu/ssss/QR/QR13-4/baxter.pdf [Accessed 15 August 2008].

Bazzanella, C., 1993. Dialogic Repetition. In H. Löffler, ed. *Dialoganalyse IV*. Tübingen: Max Niemeyer Verlag. pp.285-294.

Bellinger, D. and Gleason, J., 1982. Sex Differences in Parental Directives to Young Children. *Sex Roles*, 8(11), pp.1123-1139.

Benson, M., 1994. Lecture Listening in an Ethnographic Perspective. In J. Flowerdew, ed. *Academic Listening*. Cambridge: Cambridge University Press. pp.181-198.

Bhatia, V., 1993. *Analysing Genre: Language Use in Professional Settings*. London/New York: Longman.

Bhatia, V., 2002. Applied genre analysis: a multi-perspective model. *Iberica*, 4, pp.3-19.

Bhatia, V., 2004. *Worlds of Written Discourse: A Genre-based View*. London: Continuum.

Biber, D., 1988. *Variation Across Speech and Writing*. Cambridge: Cambridge University Press.

Biber, D., 2006. *University Language: A Corpus-based Study of Spoken and Written Registers*. Amsterdam: John Benjamins.

Biber, D., Connor, U. and Upton, T., 2007. *Discourse on the Move: Using corpus analysis to describe discourse structure*. Amsterdam: John Benjamins.

Biber, D., Johansson, S., Leech, G., Conrad, S., and Finegan, E., 1999. *Longman Grammar of Spoken and Written English*. Harlow: Pearson Education Limited.

Biggs, J., 1999. *Teaching for Quality Learning at University*. Buckingham: SRHE and Open University Press.

Björkman, B., 2010. So you think you can ELF: English as a lingua franca as the medium of instruction. *Hermes*, 45, pp.77-99.

Bligh, D., 2000. *What's the Use of Lectures?* San Francisco: Jossey-Bass.

Boegh, C., 2005. Internationalisation and teaching through English: A Danish perspective. *Educate, Vol. 5, Issue 2*, pp.1477-5557.

Bolander, M., 1988. Is there any order? On word order in Swedish learner language. *Journal of Multilingual and Multicultural Development*, 9, pp.97-113.

Brennan, S. and Schober, M.F., 2001. How listeners compensate for disfluencies in spontaneous speech. *Journal of Memory and Language*, 44, pp.274-296.

Brown, P. and Levinson, S., 1978. Universals in Language Usage: Politeness Phenomena. In E.N. Goody, ed. *Question and Politeness*. Cambridge: Cambridge University Press. pp.56-289.

Brown, P. and Levinson, S., 1987. *Politeness. Some Universals in Language*. Cambridge: Cambridge University Press.

Brutt-Griffler, J., 2002. *World English: A Study of its Development*. Clevedon and Buffalo: Multilingual Matters.

Buck, G., 1994. The appropriacy of psychometric measurement models for testing second language listening comprehension. *Language Testing*, 11, pp.145-170.

Cappella, J., 1983. Conversational Involvement: Approaching and Avoiding Others. In Wiemann, J. and Harrison, R. *Nonverbal Interaction*. Beverly Hills, CA: Sage. pp.113-148.

Chafe, W., 1982. Integration and Involvement in Speaking, Writing, and Oral Literature. In D. Tannen, ed. *Spoken and Written Language: Exploring Orality and Literacy*. Norwood, NJ: Ablex. pp.35-53.

Chafe, W., 1985. Linguistic Differences Produced by Differences Between Speaking and Writing. In D. Olson, N. Torrance and A. Hildyard, eds. *Literacy, language, and learning: The nature and consequences of reading and writing*. Cambridge: Cambridge University Press. pp.105-123.

Chafe, W., 2006. Reading Aloud. In R. Hughes, ed. *Spoken English, Applied Linguistics and TESOL: Challenges for Theory and Practice*. London: Palgrave. pp.53-71.

Charaudeau, P. and Maingueneau, D., 2002. *Dictionnaire d'Analyse du Discours*. Paris: Seuil.

Chaudron, C., Loschky, L. and Cook, J., 1994. Second Language Listening Comprehension and Lecture Note-taking. In Flowerdew, J. *Academic Listening Research perspectives*. Cambridge: Cambridge University Press. pp.75-92.

Chaudron, C. and Richards, J., 1986. The effect of discourse markers on the vomprehension of lectures. *Applied Linguistics*, pp.113-127.

Chesire, J., 1991. *English Around the World: Sociolinguistic Perspectives*. Cambridge: Cambridge University Press.

Cheville, F., 1993. English or Englishes? *English Today*, 9(4), pp.29-33.

Clark, H. and Fox Tree, J., 2002. Using uh and um in spontaneous speaking. *Cognition*, 84, pp.73-111.

Cogo, A., 2009. Accommodating Difference in ELF Conversations. In A. Mauranen and E. Ranta, eds. *English as a Lingua Franca: Studies and Findings*. Newcastle: Cambridge Scholars Press. pp.254-274.

Cogo, A. and Dewey, M., 2006. Efficiency in ELF communication: from pragmatic motives to lexico-grammatical innovation. *Nordic Journal of English Studies*, 5(2), pp.59-93.

Coker, P. and Burgoon, J., 1987. The nature of conversational involvement and nonverbal encoding patterns. *Human Communication Research*, 13, pp.463-494.

Coulthard, M. and Montgomery, M., 1981. *Studies in Discourse Analysis*. London: Routledge.

Coulthard, M. and Montgomery, M., 1981. The Structure of Monologue. In M. Coulthard and M. Montgomery, eds. *Studies in Discourse Analysis*. London: Routledge and Kegan Paul. pp.31-39.

Crawford Camiciottoli, B., 2004. Interactive discourse structuring in L2 guest lectures: Some insights from a comparative corpus-based study. *Journal of English for Academic Purposes, 3*, pp.39-54.

Crawford Camiciottoli, B., 2005. Adjusting a business lecture for an international audience: A case study. *English for Specific Purposes*, 24, pp.183-199.

Crawford Camiciottoli, B., 2007. *The Language of Business Studies Lectures*. Amsterdam: John Benjamins.

Crawford Camiciottoli, B., 2008. Interaction in academic lectures vs. written text materials: The case of questions. *Journal of Pragmatics*, pp.1216-1231.

Creswell, J., 1998. *Research design: Qualitative, Quantitative, and Mixed Methods Approaches*. 2nd ed. Thousand Oaks, CA: Sage.

Crystal, D., 2003. *English as a Global Language*. 2nd ed. Cambridge: Cambridge University Press.

Crystal, D., 2005. *How Language Works*. London: Penguin Books.

Csomay, E., 2002. Variation in Academic Lectures: Interactivity and Level of Instruction. In R. Reppen, S. Fitzmaurice and D. Biber, eds. *Using Corpora to Explore Linguistic Variation*. Amsterdam: John Benjamins. pp.205-224.

Dalton-Puffer, C., 2003. Telling each other to do things in class: directives in content and language integrated classrooms. *Views*, 12(1), pp.3-23.

DePalma, D., 2004. *A Strategic Guide to Global Marketing*. New York: John Wiley and Sons.

Drew, P. and Heritage, J., 1992. *Talk at Work*. Cambridge: Cambridge University Press.

Dudley-Evans, A., 1994. Variations in the Discourse Patterns Favoured by Different Disciplines and their Pedagogical Implications. In J. Flowerdew, ed. *Academic Listening: Research Perspectives*. Cambridge: Cambridge University Press. pp.146-158.

Dudley-Evans, A. and Johns, T., 1981. A team teaching approach to lecture comprehension of overseas students. *The Teaching of Listening Comprehension (ELT Documents Special)*, pp.30-46.

Duff, P., 2008. *Case Study Research in Applied Linguistics*. New York: Lawrence Erlbaum.

Dörnyei, Z., 2003. *Questionnaires in Second Language Research: Construction, Administration, and Processing*. Mahwas, New Hersey: Lawrence Erlbaum Associates.

Edmondson, W. and House, J., 1981. *Let's Talk and Talk about it*. München: Urban and Schwarzenberg.

EF, 2011. *EF EPI Report*. [Online] Available at: http://www.ef.fi/epi/ef-epi-ranking/ [Accessed 5 November 2011].

Ervin-Tripp, S. (1976) 'Is Sybil there? The structure of some American English directives', *Language in Society*, vol. 5, pp. 25-66.

Ervin-Tripp, S., Guo, J. and Lampert, M., 1990. Politeness and persuasion in children's control acts. *Journal of Pragmatics*, 14, pp.307-331.

Fairclough, N., 2003. *Analysing Discourse: Textual Analysis for Social Research*. London: Routledge.

Fewer, G., 1997. Beyond the language barrier [Letter to the editor]. *Nature, 385*, p.764.

Filppula, M., 2000. Inversion in Embedded Questions in Some Regional Varieties of English. In R. Bermúdes-Otero, D. Denison, R. Hogg and C. McCully, eds. *Generative Theory and Corpus Studies. A dialogue from 10ICEHL Berlin*. Berlin. pp.439-453.

Firth, A., 1990. "Lingua franca" negotiations: Towards an interactional approach. *World Englishes*, 9(3), pp.69-80.

Firth, A., 1996. The discursive accomplishment of normality. On "lingua franca" English and conversation analysis. *Journal of Pragmatics*, 26, pp.237-259.

Flowerdew, J., 1994. *Academic Listening: Research Perspective*. Cambridge: Cambridge University Press.

Flowerdew, J. and Miller, L., 1997. The teaching of academic listening comprehension and the question of authenticity. *English for Specific Purposes*, 16(1), pp.27-46.

Flowerdew, J. and Miller, L., 2005. *Second Language Listening: Theory and Practice*. New York: Cambridge University Press.

Flowerdew, J. and Tauroza, S., 1995. The effect of discourse markers on second language lecture comprehension. *Studies in Second Language Acquisition, 17*, pp.435-458.

Flyvbjerg, B., 2011. Case Study. In N. Denzin and Y. Lincoln, eds. *The Sage Handbook of Qualitative Research*. 4th ed. Thousand Oaks, CA: Sage. pp.301-316.

Fortanet, I., 2004. Enhancing the Speaker-audience Relationship in Academic Lectures. In P.G. Conejos, R.G. Morón, L.F. Amaya and M.P. Cruz, eds. *Current trends in intercultural, cognitive and social pragmatics*. Sevilla: Kronos, SA. pp.83-96.

Fortuño, B., 2006. *Discourse Markers within the University Lecture Genre: A contrastive study between the Spanish and North-American Lectures*. Castelló de la Plana: Universitat Jaume I, an online PhD dissertation. Available at: http://www.tdx.cat/bitstream/handle/10803/10442/tesis.pdf;jsessionid=B938A61F57DE22EA1698C7DE394F75E6.tdx2?sequence=2 [accessed 14 June 2008].

Fox Tree, J., 2001. Listeners' uses of um and uh in speech comprehension. *Memory and Cognition*, 29, pp.320-326.

Frederick, P., 1986. The lively lecture - 8 variations. *College Teaching*, 34(2), pp.43-50.

Freed, B., 1995. What Makes us Think that Students Who Study Abroad Become Fluent? In B. Freed, ed. *Second Language Acquisition in a Study Abroad Context*. Amsterdam: John Benjamins. pp.123-148.

Frow, J., 1980. Discourse genres. *The Journal of Literary Semantics*, 9(2), pp.73-81.

Garfield, E., 1967. English - An international language for science? *Essays of an Information Scientist Current Contents*, 1, pp.19-20.

Goffman, E., 1974. *Frame Analysis: An Essay on the Organization of Experience*. New York: Harper and Row.

Goffman, E., 1981. *Forms of Talk*. Philadelphia: University of Pennsylvania Press.

Goodwin, M., 2006. Participation, affect, and trajectory in family directive/response sequences. *Text and Talk*, 26, pp.515-543.

Grabe, W., 1988. English, information management, and technology transfer: A rational for English as an international language. *World Englishes, 7*, pp.63-72.

Graddol, D., 1997. *The Future of English?* London: The British Council.

Graesser, A.C., 1997. Discourse comprehension. *Annual Review of Psychology*, 48, pp.163-189.

Greenbaum, S. and Quirk, R., 1990. *A Student's Grammar of the English Language*. Essex: Longman.

Gumperz, J., 1982. *Discourse Strategies*. Cambridge: Cambridge University Press.

Haberland, H., 1989. Whose English, nobody's business. *Journal of Pragmatics*, 13, pp.927-938.

Halliday, M., 1978. *Language as Social Semiotic. The Social Interpretation of Language and Meaning*. London: Edward Arnold.

Halliday, M., 1989 (1985). *Spoken and Written Language*. Oxford: Oxford University Press.

Halliday, M. and Hasan, R., 1976. *Cohesion in English*. London: Longman.

Harris, C., 1931. The element of repetition in nature and the arts. *The Musical Quarterly*, 17(3), pp.302-331.

Hasan, R., 1984. Coherence and Cohesive Harmony. In Flood, J. *Understanding Reading Comprehension: Cognition, Language, and the Structure of Prose*. Newark, Delaware: International Reading Association. pp.181-219.

Hellekjaer, G., 2010. Language Matters: Assessing Lecture Comprehension in Norwegian English-medium Higher Education. In Dalton-Puffer, C., Nikula, T. and Smit, U. *Language use in Language and Content Integrated Learning (CLIL)*. Amsterdam/Philadelphia: John Benjamins. pp.233-258.

Hellerman, J., 2003. The interactive work of prosody in the IRF exchange: Teacher repetition in feedback moves. *Language in Society*, 32, pp.79-104.

Hilbert, M., 2008. Interrogative Inversion in Non-standard Varieties of English. In P. Siemund and N. Kintana, eds. *Language Contact and Contact Languages*. Amsterdam: John Benjamins. pp.261-289.

Hjerppe, R., 2011. *An Economic History of Finland*. [Online] Available at: http:/eh.net/encyclopedia/article/hjerppe.finland [Accessed 5 November 2011].

Hoey, M., 1983. *On the Surface of Discourse*. London/Boston: Allen and Unwin.

Hoey, M., 1991. *Patterns of Lexis in Text*. Oxford: Oxford University Press.

Hoey, M., 2000. *Textual Interaction: An Introduction to Written Discourse Analysis*. London: Routledge.

Holmes, J., 1983. The Structure of Teachers' Directives. In Richards, J. and Schmidt, R. *Language and Communication*. New York: Longman. pp.89-115.

House, J., 1999. Misunderstanding in Intercultural Communication. Interactions in English as Lingua Franca and the Myth of Mutual Intelligibility. In C. Gnutzmann, ed. *Teaching and Learning English as a Global Language*. Tübingen: Stauffenburg. pp.72-88.

House, J., 2003. English as a lingua franca: A threat to multilingualism? *Journal of Sociolinguistics*, 7(4), pp.556-578.

Huettner, J., 2009. Fluent speakers - fluent interactions: on the creation (co)-fluency in English as a lingua franca. In A. Mauranen and E. Ranta, eds. *English as a Lingua Franca: studies and findings*. Newcastle: Cambridge Scholars Publishing. pp.274-297.

Hyland, K., 2002. *Teaching and Researching Writing*. London: Longman.

Hynninen, N., 2010. "We try to to to speak all the time in easy sentences" - Student conceptions of ELF interaction. *Helsinki English Studies*, 6, pp.29-43.

Hynninen, N., 2011. The practice of 'mediation' in English as a lingua franca interaction. *Journal of Pragmatics*, 43(4), pp.965-977.

Hyppönen, O. and Lindén, S., 2009. *Opettajan käsikirja - opintojaksojen rakenteet, opetusmenetelmät ja arviointi [The Teacher's Manual - structures of teaching periods, teaching methods and assessment]*. Espoo: Teknillinen korkeakoulu opetuksen ja opiskelun tuki [Helsinki University of Technology Teaching and Learning Development Unit].

Itkonen, T., 2010. *Spoken Language Proficiency Assessment: Assessing Speaking or Evaluating Acting*. Unpublished Master's Thesis: University of Helsinki.

Jenkins, J., 2000. *The Phonology of English as an International Language: New Models, New Norms, New Goals*. Oxford: Oxford University Press.

Jenkins, J., 2003. *World Englishes: A Resource Book for Students*. London and New York: Routledge.

Jenkins, J., 2007. *English as a Lingua Franca: Attitude and Identity*. Oxford: Oxford University Press.

Jenkins, J., 2011. Accommodating (to) ELF in the international university. *Journal of Pragmatics*, 43, pp.926-936.

Jenkins, J., Cogo, A. and Dewey, M., 2011. Review of developments in researach into English as a lingua franca. *Language Teaching*, 44, pp.281-315.

Jensen-Eriksen, N., 2007. *Läpimurto - Metsäteollisuus kasvun, integraation ja kylmän sodan Euroopassa [The Breakthrough - Forest Based Industries in the Europe of Growth, Integration, and Cold War 1950 - 1973]*. Helsinki: SKS.

Johnstone, B., 1994. Repetition in Discourse: a Dialogue. In B. Johnstone, ed. *Repetition in Discourse: Interdisciplinary Perspectives. Volume 1*. Norwood, NJ: Ablex Publishing Corporation. pp.1-20.

Jones, K., 1992. A question of context: directive use at a Morris Team meeting. *Language in Society*, 21, pp.427-445.

Jordan, R., 1989. English for academic purposes (EAP). *Language Teaching*, 22(3), pp.151-164.

Kachru, B., 1982. *The Other Tongue - English Across Cultures*. Urbana, Illinois: University of Illinois Press.

Kachru, B. (1985) 'Standards, Codification and Sociolinguistic Realism: the English Language in the Outer Circle', in Quirk, R., Widdowson, H. and Cantù, Y. *English in the World. Teaching and Learning the Language and Literatures*, Cambridge: Cambridge University Press. pp.11-30.

Kaplan, R., 2001. English - the Accidental Language of Science? In Ammon, U. *The Dominance of English as a Language of Science: Effects on Other Languages and Language Communities*. New York: Mouton de Gruyter. pp.3-26.

Karlsson, F., 1983. *Finnish Grammar*. Porvoo: WSOY.

Kaur, J., 2009. Pre-empting Problems of Understanding in English as a Lingua Franca. In A. Mauranen and E. Ranta, eds. *English as a Lingua Franca: Studies and Findings*. Newcastle: Cambridge Scholars Press. pp.107-124.

Kintsch, W., 1988. The role of knowledge in discourse comprehension: A construction-integration model. *Psychological Review*, 95, pp.162-182.

Kjellmer, G., 2008. Self-repetition in Spoken English Discourse. In T. Nevalainen, ed. *The Dynamics of Linguistic Variation: Corpus Evidence on English Past and Present*. Amsterdam, Philadelphia: John Benjamins. pp.37-60.

Klaassen, R., 2001. *The International University Curriculum: Challenges in English Medium Engineering Education*. Delft: Doctoral Thesis, Department of Communication and Education, Delft University of Technology.

Knapp, K., 1987. English as an international lingua franca and the teaching of intercultural communication. In W. Lörsche and R. Schulze, eds. *Perspectives on Language in Performance*. Tübingen: Narr. pp.1022-1039.

Knight, J., 2005. *Internationalization of higher education practices and priorities: 2005*. The International Association of Universities.

Kuisma, M., 2006. *Metsäteollisuuden maa [The Land of the Forest Industry]*. Helsinki: SKS.

Kuisma, M., 2008. *Kriisi ja kumous - Metsäteollisuus ja maailmantaluouden murros 1973 - 2008 [Crisis and Upheaval - Forest Based Industry and Global Economy Changes 1973 - 2008]*. Helsinki: SKS.

Lehtonen, J. and Sajavaara, K., 1985. A Silent Finn. In D. Tannen and M. Saville-Troike, eds. *Perspectives on Silence*. Norwood, NJ: Ablex. pp.193-201.

Levelt, W., 1983. Monitoring and self-repair in speech. *Cognition*, 14, pp.41-104.

Levinson, S., 2005. Living with Manny's dangerous idea. *Discourse Studies*, 7(4-5), pp.431-453.

Levinson, S., 2006. Cognition at the heart of human interaction. *Discourse Studies*, 8(1), pp.85-93.

Linell, P., 1998. *Aproaching Dialogue: Talk, Interaction and Contexts in Dialogical Perspectives*. Amsterdam: John Benjamins.

Ljosland, R., 2007. English in Norwegian academia: a step towards diglossia? *World Englishes, Vol. 26, No. 4*, pp.395-410.

Lynch, T., 1994. Training Lecturers for International Audiences. In J. Flowerdew, ed. *Academic Listening: Research Perspectives*. Cambridge: Cambridge University Press. pp.269-289.

Martin, J., 1985. Process and Text: Two Aspects of Human Semiosis. In J. Benson and W. Greaves, eds. *Systemic Perspectives on Discourse, Vol. 1*. Norwood, NJ: Ablex. pp.248-274.

Martin, J. and Rose, D., 2008. *Genre relations: Mapping culture*. London: Equinox.

Mason, A., 1994. By Dint of: Student and Lecturer perceptions of Lecture Comprehension Strategies in First-term Graduate Study. In Flowerdew, J. *Academic Listening Research perspectives*. Cambridge: Cambridge University Press. pp.199-218.

Mauno, A., Hakala, K., Hauhio, L. and Vahtikari, K., 2007. *Development of the International Master's Programme in Forest Products Technology: 2002-2006 Final Report*. Espoo: Helsinki University of Technology, Department of Forest Products Technology.

Mauranen, A., 1993. *Cultural Differences in Academic Rhetoric*. Frankfurt am Main: Verlag Peter Lang GmbH.

Mauranen, A., 1994. Two discourse worlds: Study genres in Britain and Finland. *Finlance*, 8, pp.1-40.

Mauranen, A., 2003. The corpus of English as lingua franca in academic settings. *TESOL Quarterly*, 37(3), pp.513-527.

Mauranen, A., 2004. Speech Corpora in the Classroom. In G. Aston, S. Bernardini and D. Stewart, eds. *Corpora and Language Learners*. Amsterdam: John Benjamins. pp.195-211.

Mauranen, A. (2005) 'English as a Lingua Franca: An Unknown Language?', in Cortese, G. and Duszak, A., eds. *Identity, Community, Discourse. English in Intercultural Settings*, Bern: Peter Lang. pp.269-293.

Mauranen, A., 2006. Rhetorically Speaking: Repetition and Repair in Making a Point. In Bamford, J. and Bondi, M. *Managing Interaction in Professional Discourse: Intercultural and Interdiscoursal Perspectives*. Rome: Officina Edizioni. pp.101-117.

Mauranen, A., 2006. Signalling and preventing misunderstanding in English as lingua franca communication. *International Journal of the Sociology of Language*, 177, pp.123-150.

Mauranen, A., 2009. Englanti lingua francana - onko sillä kulttuuria? [English as a Lingua Franca - Does it Have a Culture?]. In A. Idström and S. Sosa, eds. *Kielissä kulttuurin ääni [Languages Resonating Culture]*. Helsinki: SKS. pp.290-305.

Mauranen, A., 2009. Spoken Rhetoric: How do Natives and Non-natives fare? In Suomela-Salmi, E. and Dervin, F. *Cross-linguistic and Cross-cultural Perspectives on Academic Discourse*. Amsterdam: John Benjamins. pp.199-218.

Mauranen, A., 2011. English as the Lingua Franca of the Academic World. In D. Belcher, A.M. Johns and B. Paltridge, eds. *New Directions in English for Specific Purposes Research*. Ann Arbor: Michigan University Press. pp.94-117.

Mauranen, A., 2012. *Exploring ELF Academic English shaped by Non-native Speakers*. Cambridge: Cambridge University Press.

Mauranen, A. and Metsä-Ketelä, M., 2006. Introduction. *Nordic Journal of English Studies*, 5(2), pp.1-8.

Mauranen, A., Perez-Llantada, C. and Swales, J., 2010. Academic Englishes - A standardized knowledge? In A. Kirkpatrick, ed. *The Routledge Encyclopaedia of World Englishes*. London: Routledge. pp.634-652.

McArthur, T., 2001. World English(es), World Dictionaries. In B. Moore, ed. *Who's Centric Now? The Present State of Post-colonial Englishes*. Oxford: Oxford University Press. pp.1-22.

McCarthy, M., 1991. *Discourse Analysis for Language Teachers*. Cambridge: Cambridge University Press.

McCrum, R., 2010. *Globish: How the English Language Became the World's Language*. New York: Viking.

Meierkord, C., 1998. Lingua Franca English. Characteritics of successul non-native - non-native speaker discourse. *Erfurt Electronic Studies in English (EESE)*, 7 Available at: http://webdoc.sub.gwdg.de/edoc/ia/eese.html [Accessed November 9, 2010].

Metsäteollisuus, 2011. *Suomen metsäteollisuuden historia tiivistetysti [The History of Finnish Forest Industry in Brief]*. [Online] Available at: http://www.metsateollisuus.fi/Infokortit/historialyhyesti/Sivut/default.aspx [Accessed 5 November 2011].

Miles, M. and Humberman, A., 1994. *Qualitative Data Analysis: An Expanded Source Book*. 2nd ed. Thousand Oaks, CA: Sage.

Morell, T., 2004. Interactive lecture discourse for university EFL students. *English for Specific Purposes*, 23(3), pp.325-338.

Morley, J., 2002. Aural Comprehension Instruction: Principles and Practices. In M. Celce-Murcia, ed. *Teaching English as a Second or Foreign Language*. 3rd ed. Boston: Heinle and Heinle. pp.69-85.

Morrison, J., 1974, reported in Jordan, 1989: 153. *An Investigation of Problems in Listening Comprehension Encountered by Overseas Students in the First Year of Postgraduate Studies in Science at the University of Newscastle upon Tyne*. Newcastle upon Tyne: Unpublished M.Ed Thesis, University of Newcastle upon Tyne.

Mulholland, J., 1994. *Handbook of Persuasive Tactics: A Practical Language Guide*. New York: Routledge.

Mulligan, D. and Kirkpatrick, A., 2000. How much do they understand? Lectures, students and comprehension. *Higher Education Research and Development*, 19(3), pp.311-335.

Nerrière, J.-P., 2004. *Don't Speak English, Parlez Globish*. Paris: Editions d'Organisation.

Norrick, N., 1987. Functions of repetition in conversation. *Text*, 7, pp.245-264.

Northcott, J., 2001. Towards an ethnography of the MBA classroom: A consideration of the role of interactive lecturing styles within the context of one MBA programme. *English for Specific Purposes*, 20(1), pp.15-37.

Nunan, D., 2001. English as a global language. *TESOL Quarterly*, 35(4), pp.605-606.

Ostler, N., 2010. *The Last Lingua Franca*. London: Allen Lane.

Patterson, M., 1983. *Nonverbal Behavior: A Functional Perspective*. New York: Springer - Verlag.

Persson, G., 1974. *Repetition in English*. Uppsala: University of Uppsala.

Phillipson, R., 2009. English in Higher Education, Panacea or Pandemic? In Harder, P. *English in Denmark: Language Policy, Internationalization and University Teaching*

Volume 9 of Angles of the English-speaking World. Copenhagen: Museum Tusculanum Press and the University of Copenhagen. pp.29-57.

Pitzl, M.-L., 2005. Non-understanding in English as a lingua franca: examples from a business context. *Vienna English Working Papers*, 14, Available at: http://www.univie.ac.at/Anglistik/Views0502mlp.pdf [Accessed September 8, 2008], pp.50-71.

Potter, J., 1996. *Representing Reality: Discourse, Rhetoric and Social Construction*. London: Sage.

Prodromou, L., 2008. *English as a Lingua Franca: A Corpus-Based Analysis*. London: Continuum.

Pynnönen, H., 2005. *Opiskelijakysely koskien kansainvälisyyshanketta [Student Survey on Internationalization]*. Espoo: Forest Products Technology Guild.

Querol-Julian, M., 2008. The role of questions in English academic lectures. *Newcastle Working Papers in Linguistics*, 14, pp.100-111.

Quirk, R., 1990. Language Varieties and Standard Language. *English Today*, 21, pp.3-10.

Ranta, E., 2009. Syntactic Features in Spoken ELF - Learner Language or Spoken Grammar? In Mauranen, A. and Ranta, E. *English as a Lingua Franca*. Newcastle upon Tyne: Cambridge Scholars Publishing. pp.84-106.

Reppen, R., 2008. Directives in spoken and written university language: a corpus-based look. In *AACL 2008 American Association for Corpus Linguistics Conference March 13-15, 2008*. Provo, Utah, 2008.

Rizzi, L., 1996. Residual Verb Second and WH Criterion. In A. Belletti and L. Rizzi, eds. *Parameters and Functional Heads*. Oxford: Oxford University Press. pp.63-90.

Rost, M., 1994. On-line Summaries as Representations of Lecture Understanding. In M.H. Long and J.C. Richards, eds. *Academic Listening Research Perspectives*. Cambridge: Cambridge University Press. pp.93-127.

Rost, M., 2002. *Teaching and Researching Listening*. New York: Pearson.

Routio, P., 2007. *Arteology. The Science of Artifacts*. [Online] Available at: http://www2.uiah.fi/projects/metodi/171.htm [Accessed 10 May 2010].

Sacks, H., Schegloff, E. and Jefferson, G., 1974. A simplest systematics for the organization of turn-taking for conversation. *Language*, 50, pp.696-735.

Sajavaara, K. and Lehtonen, J., 1997. The Silent Finn Revisited. In A. Jaworski, ed. *Silence. Interdisciplinary Perspectives*. New York: Mouton de Gruyter. pp.263-283.

Salehzadeh, J., 2005. *Academic Listening Strategies: A Guide to Understanding Lectures*. Michigan: Michigan University Press.

Sanders, J.M., 1999. *Confronting the Boss Indirectly: Study of Cockpit Crews Finds Co-pilots Use 'Hints' to Correct Captains*. Atlanta, Georgia: Georgia Tech. Available at: http://gtresearchnews.gatech.edu/newsrelease/CREW.html [accessed 15 November 2008].

Sand, A. and Kolbe, D., 2010. Embedded inversion worldwide. *Linguaculture*, 2(1), pp.25-42.

Schegloff, E., 1987. Some sources of misunderstanding in talk-in-interaction. *Linguistics*, 25, pp.201-218.

Schegloff, E., 2007. *Sequence Organization in Interaction: A Primer in Conversation Analysis, Volume 1*. Cambridge: Cambridge University Press.

Schiffrin, D., 1988. *Discourse Markers*. Cambridge: Cambridge University Press.

Schiffrin, D., 1994. *Approaches to Discourse*. Oxford: Blackwell.

Schiffrin, D., Tannen, D. and Hamilton, H., 2001. *Handbook of Discourse Analysis*. Oxford: Blackwell.

Scollon, R. and Scollon, S., 2001. *Intercultural Communication: A Discourse Approach*. Malden, MA: Blackwell Publishing.

Scott, M., 2004. *WordSmith Tools version 4*. Oxford: Oxford University Press.

Searle, J., 1969. *Speech Acts: An Essay in the Philosophy of Language*. Cambridge: Cambridge University Press.

Searle, J., 1976. The classification of illocutionary acts. *Language in Society*, 5(1), pp.1-24.

Seidlhofer, B., 2001. Closing a conceptual gap: the case for a description of English as a lingua franca. *International Journal of Applied Linguistics*, 11(2), pp.133-158.

Seidlhofer, B., 2011. *Understanding English as a Lingua Franca*. Oxford: Oxford University Press.

Simpson, R., 2004. Stylistic Features of Academic Speech: The Role of Formulaic Expressions. In T. Upton and U. Connor, eds. *Discourse in the Professions: Perspectives from Corpus Linguistics*. Amsterdam: John Benjamins. pp.37-64.

Sinclair, J. and Coulthard, M., 1975. *Toward an Analysis of Discourse: The English Used by Teachers and Pupils*. Oxford: Oxford University Press.

Sinclair, J. and Coulthard, M., 1992. Towards an Analysis of Discourse. In M. Coulthard, ed. *Advances in Spoken Discourse Analysis*. London: Routledge. pp.1-34.

Smit, U., 2010. *English as a Lingua Franca in Higher Education: A Longitudinal Study of Classroom Discourse*. Berlin and New York: Walter de Gruyter.

Stake, R., 1995. *The Art of Case Study Research*. Thousand Oaks, CA: Sage.

Stenström, A.-B., 1984. *Questions and Responses in English Conversation*. Doctoral Dissertation Malmö: Liber Förlag.

Stenström, A.-B., 1994. *An Introduction to Spoken Interaction*. London and New York: Longman.

Stotesbury, H., 2003. Evaluation in research article abstracts in the narrative and hard sciences. *Journal of English for Academic Purposes*, 2, pp.327-341.

Stotesbury, H., 2009. A university course in English business communication and the actual needs of Finnish business executives. *Nordic Journal of English Studies*, 8(1), pp.101-122.

Suviniitty, J., 2007. *English as a lingua franca: A tool for educating engineers*. Coimbra, Portugal: International Network for Engineering Education Research Conference Proceedings. Available at: http://icee2007.dei.uc.pt/proceedings/papers/211.pdf.

Suviniitty, J., 2009. *What you have to understand is. Interactional features in lectures*. Rotterdam: SEFI 2009 Conference Proceedings.

Swales, J., 1981. *Aspects of Article Introductions. ESP Research Reports, No. 1*. Birmingham: Aston University.

Swales, J., 1990. *Genre Analysis, English in Academic and Research Settings*. Cambridge: Cambridge University Press.

Swales, J., 1997. English as Tyrannosaurus Rex. *World Englishes, 16*, pp.373-382.

Swales, J., 1998. *Other Floors, Other Voices: A Textography of A Small University Building*. Mahwah, NJ: Lawrence Erblaum.

Swales, J., 2004. *Research Genres*. Cambridge: Cambridge University Press.

Swales, J. and Feak, C., 2004. *Academic Writing for Graduate Students: A Course for Nonnative Speakers of English*. 2nd ed. Ann Arbor, Michigan: The University of Michigan Press.

Swan, M., 2005. *Practical English Usage*. 3rd ed. Oxford: Oxford University Press.

Tannen, D., 1989. *Talking Voices: Repetition, Dialogue, and Imagery in Conversational Discourse*. Cambridge: Cambridge University Press.

Tanskanen, S.-K., 2006. *Collaborating Towards Coherence: Lexical Cohesion in English Discourse*. Amsterdam and Philadelphia: John Benjamins.

Tatzl, D., 2011. English-medium master's programmes at an Austrian university of applied sciences: Attitudes, experiences and challenges. *Journal of English for Academic Purposes, Vol. 10*, pp.252-270.

Thompson, S., 1998. Why Ask Questions in Monologue? Language Choice at Work in Scientific and Linguistic Talk. In S. Hunston, ed. *Language at Work*. Clevedon: Multilingual Matters. pp.137-150.

Tiittula, L., 1993. *Kulttuurit kohtaavat. Suomalais-saksalaiset kulttuurierot talouselämän näkökulmasta [Cultural Encounters: Finnish-German Cultural Differences from the Economic Perspective]*. Helsinki: Helsinki School of Economics.

Tomasello, M., 2003. *Constructing a Language: A Usage-based Theory of Language Acquisition*. USA: First Harvard University Press.

Trimnell, E., 2005. *Why You Need a Foreign Language and How to Learn One*. Cincinnati, OH: Beechmont Crest Publishing.

Trochim, W., 2001. *The Research Methods Knowledge Base*. Stamford, CN: Thomson Learning.

Trosborg, A., 1995. *Interlanguage Pragmatics: Requests, Complaints, and Apologies*. New York: Mouton de Gruyter.

Van Dijk, T., 1997. Political Discourse and Racism: Describing Others in Western Parliaments. In S.H. Riggins, ed. *The Language and Politics of Exclusion: Others in Discourse*. Thousand Oaks, CA: Sage. pp.31-64.

Van Dijk, T. and Kintsch, W., 1983. *Strategies of Discourse Comprehension*. New York: Academic Press.

Watterson, M., 2008. Repair of non-understanding in English in international communication. *World Englishes*, 27(3-4), pp.378-406.

Wennerstrom, A., 2000. The Role of Intonation in Second Language Fluency. In H. Riggenbach, ed. *Perpectives on Fluency*. Ann Arbor: University of Michigan Press. pp.102-127.

Ventola, E., 1987. *The structure of social interaction. A systemic approach to the semiotics of service encounters*. London: Pinter.

West, C., 1998. Not Just "Doctors' Orders": Directive-response Sequences in Patients' Visits to Women and Men Physicians. In J. Coates, ed. *Language and Gender: A Reader*. Oxford: Basil Blackwell. pp.328-353.

Widdowson, H., 1979. *Explorations in Applied Linguistics*. Oxford: Oxford University Press.

Widdowson, H., 1980. Models and fictions. *Applied Linguistics*, 1(2), pp.165-170.

Widdowson, H., 1994. The ownership of English. *TESOL Quarterly*, 28(2), pp.377-389.

Widdowson, H., 1997. The Forum: EIL, ESL, EFL: Global issues and local interests. *World Englishes*, 16(1), pp.135-146.

Widdowson, H., 1998. EIL: Squaring the circles: A reply. *World Englishes*, 17(3), pp.397-404.

Vine, B., 2004. *Getting Things Done at Work: The Discourse of Power in Workplace Interaction*. Amsterdam: John Benjamins.

Wächter, B. and Maiworm, F., 2002. *English-Language-Taught Degree Programmes in European Higher Education (ACA Papers on International Cooperation in Education)*. Bonn: Lemmens.

Wächter, B. and Maiworm, F., 2008. *English-Language-Taught Degree Programmes in European Higher Education. The Picture in 2007 (ACA Papers on International Cooperation in Education)*. Bonn: Lemmens.

Yin, R., 2003. *Applications of Case Study Research*. 3rd ed. Thousand Oaks, CA: Sage.

Young, L., 1994. University Lectures - Macro-structure and Micro-features. In Flowerdew, J. *Academic Listening: Research Perspectives*. Cambridge: Cambridge University Press. pp.159-176.

Ädel, A. and Mauranen, A., 2010. Metadiscourse: Diverse and divided perspectives. *Nordic Journal of English Studies*, 9(2), pp.1-11.

Appendices

Appendix 1: Finnish Paper Engineers' Association Questionnaire

Survey on English Use

Select the most appropriate of the given choices or fill out your response in a space provided.

Background information

Gender

- ☐ female
- ☐ male

Native language

- ☐ Finnish
- ☐ Swedish

Other, please specify

Your job title

Your major during your studies

Completed studies of English (old or new credits)

Have you seen benefits from your English courses in your working life?

- ☐ Yes
- ☐ No

If you responded "no", please tell why courses have not been useful.

Use of English

Select the most appropriate of the given options.

- ☐ Daily
- ☐ Weekly
- ☐ Sometimes
- ☐ Hardly at all

Use Situations

Select all the situations in which you use English from the following choices.

- ☐ Negotiations/meetings
- ☐ Phone conversations
- ☐ Other, conversations
- ☐ E-mail
- ☐ Writing reports
- ☐ Writing articles

Other, please specify

Do you use English more with

- ☐ Native speakers of English
- ☐ Non-native speakers of English

Do you use more

- ☐ Field-specific vocabulary
- ☐ Everyday vocabulary

Problem situations

In your opinion, do you encounter problems in your English use

- ☐ Daily
- ☐ Weekly
- ☐ Sometimes
- ☐ Hardly ever

Please organize the following reasons for possible problem situations in the order of importance
(1 most important, 7 least important).

	Own spoken English skills
	Own written English skills
	Own listening/reading comprehension
	Interlocutor spoken English skills
	Interlocutor written English skills
	Interlocutor listening/reading comprehension

Other, please specify

Do you encounter the above mentioned problems more

- With native speakers of English
- With non-native speakers of English

Further comments

Thank you!

Jaana Suviniitty

Appendix 2: Student Questionnaire

Please circle the correct alternative or write your answer in the space reserved for it.

1. I am 1 Male 2 Female
2. I was born (year) _____
3. My native language is 1 Finnish 2 Swedish 3 Other, specify _____

Please circle the most appropriate alternative. One response per question.

4. I speak English
   1 Daily
   2 Weekly
   3 Sometimes
   4 Hardly ever
5. I acquired English
   1 At school (general studies in native language)
   2 In an English-speaking country
   3 In a school where teaching was in English (with native language surroundings)
   4 Elsewhere, specify _____
6. The level of my English skills in my opinion is
   1 Excellent
   2 Good
   3 Fair
   4 Poor

The following questions pertain to the lecture you just attended.
Please circle the alternative corresponding to your opinion.

		Agree	Somewhat agree	Somewhat disagree	Disagree
7.	I understood the contents of the lecture well.	1	2	3	4
8.	I did not understand the main contents of the lecture.	1	2	3	4
9.	Most of the lecture remained unclear to me.	1	2	3	4
10.	The atmosphere during the lecture was relaxed.	1	2	3	4
11.	The atmosphere during the lecture encouraged to question and to discuss the topic.	1	2	3	4
12.	I would have understood the lecture better in my native language.	1	2	3	4
13.	The topic of the lecture was so challenging that the language used would have not influenced my understanding of the lecture.	1	2	3	4
14.	The contents of the lecture were presented logically.	1	2	3	4
15.	It was easy to follow the lecture.	1	2	3	4
16.	The contents of the lecture remained secondary since I concentrated on the language so much.	1	2	3	4

17.	It was difficult to follow the lecture, but it had little or nothing to do with the language used.	1	2	3	4
18.	I felt uneasy for the lecturer while he/she lectured in English.	1	2	3	4
19.	I would prefer a native-speaker of English as a lecturer.	1	2	3	4

Page 2 of the questionnaire

The following questions pertain to the lecturer's English skills.
Please circle the alternative(s) corresponding to your opinion.

20. The lecturer's language skills in my opinion are
    1 Excellent
    2 Good
    3 Fair
    4 Poor

21. The lecturer's language skills lack in
    1 Vocabulary
    2 Fluency
    3 Intonation (=melody of speech)
    4 Pronouncing single sounds
    5 Other, specify _____

22. Further comments:

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

Thank you for your responses and for your help!

Appendix 3: Transcription conventions

The transcriptions use the ELFA corpus transcription guide (http://www.eng.helsinki.fi/elfa/ELFA transcription guide.pdf). Special symbols used in the text are explained below. Speaker codes (<S1>, <S2>, etc.) are used to refer to specific speakers in the lectures.

<S1> </S1>	Utterance begins/ends
,	Brief pause 2–3 sec.
.	Pause 3–4 sec.
[text]	Overlapping speech (approximate, shown to the nearest word, words not split by overlap tags)
EU	Capital letters (for acronyms)
<NAME>	Names of participants
<SIC> text </SIC>	Nonsense words
<FINNISH> text </FINNISH>	Switching into a foreign language (language indicated in tags)
/…/	Omitted text from transcription
(‘text’)	English translation of code-switches
@ @	Laughter, words spoken with laughter